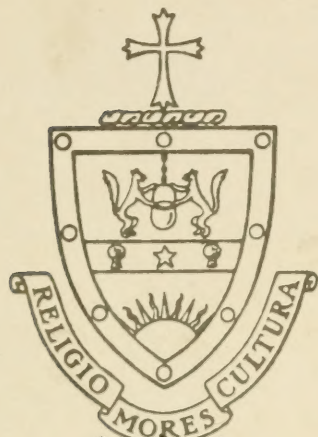




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REPORT

OF THE

BUREAU OF MINES

OF THE

Department of Internal Affairs of  
Pennsylvania.

1901.

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WM. STANLEY RAY,  
STATE PRINTER OF PENNSYLVANIA.  
1902.





## LETTER OF TRANSMITTAL.

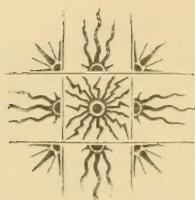
Bureau of Mines,  
April 1, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In accordance with Section 5 of an act establishing a Bureau of Mines in the Department of Internal Affairs, approved July 15, 1897, I have the honor to herewith submit the Report of the Bureau of Mines for the year ending December 31, 1901, together with the reports of the Anthracite and Bituminous Inspectors.

Very respectfully,

JAMES E. RODERICK,  
Chief of Bureau of Mines.





REPORT

OF THE

BUREAU OF MINES.

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COMMUNICATION.

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Department of Internal Affairs,

Harrisburg, April 5, 1902.

To His Excellency, William A. Stone, Governor of Pennsylvania:

Sir: In compliance with the requirements of the act of June 2, 1891, and that of May 15, 1893, relative to the Mine Inspectors' Reports of the Anthracite and Bituminous coal regions, I have the honor to present to you for transmission to the General Assembly the Report of the Bureau of Mines for the year 1901.

Very Respectfully,

JAMES W. LATTA,  
Secretary of Internal Affairs.





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LAWS RELATING  
TO  
COAL MINING.

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# Anthracite Mining Laws of Pennsylvania.

## LAWS RELATING TO COAL MINING.

### AN ACT

To provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith.

#### ARTICLE I.

Section 1. Be it enacted, &c., That this act shall apply to every anthracite coal mine or colliery in the Commonwealth, provided the said mine or colliery employs more than ten (10) persons.

#### ARTICLE II.

##### Inspectors and Inspection Districts.

Section 1. The counties of Susquehanna, Wayne, Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland, Columbia, Lebanon and Dauphin, or so much of them as may be included under the provisions of this act, shall be divided into eight (8) inspection districts as follows:

Section 2. First. All that portion of the Lackawanna coal field lying northeast of East and West Market streets in the city of Scranton, and of Slocum and Drinker streets in the borough of Dunmore, including the coal fields of Susquehanna and Wayne counties.

Second. That portion of the Lackawanna coal field in Lackawanna county lying southwest of East and West Market streets in the city of Scranton, and west of Slocum and Drinker streets in the borough of Dunmore.

Third. That portion of the Wyoming coal field situated in Luzerne county, east of and including Plains and Kingston townships.

Fourth. The remaining portion of the Wyoming coal field west of Plains and Kingston townships, including the city of Wilkes-Barre and the boroughs of Kingston and Edwardsville.

Fifth. That part of Luzerne county lying south of the Wyoming coal field together with Carbon county.

Sixth. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and east of a meridian line through the centre of the borough of Girardville.

Seventh. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and west of a meridian line through

the centre of the borough of Girardville, together with Columbia, Northumberland and Dauphin counties.

Eighth. All that part of the Schuylkill coal field in Schuylkill county lying south of the Mahanoy Valley, and the county of Lebanon.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of expiration of term, resignation, removal for cause or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the counties of Susquehanna, Wayne and Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Sullivan, Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland, Lebanon, Columbia and Dauphin.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk, shall each receive the sum of five dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return by the nearest practicable railway route.

Section 5. Whenever candidates for the office of inspector are to be examined, the said examiner shall give public notice of the fact in not more than five papers published in the inspection district and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and four of them shall agree in their recommendation of all candidates to the Governor who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answered thereto shall be sent to the Secretary of the Commonwealth, and published in at least two local papers, daily or weekly, and shall recommend only such applicants as they find qualified for the office.

Should the Board of Examiners not be able to agree in their selection and recommendation of a candidate, the judges of the court of common pleas shall dissolve the said board and appoint a new board of like qualifications and powers.

Upon the recommendation of the Board of Examiners as aforesaid, the Governor shall appoint such person or persons to fill the office

of inspector of mines under this act, and shall issue to him a commission for the term of five years, subject, however, to removal for neglect of duty or malfeasance in office as hereinafter provided for.

Section 6. The person so appointed must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of working coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five (5) years' practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Before entering upon the duties of his office he shall take an oath or affirmation before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall also provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Section 7. The salary of each of the said inspectors shall be three thousand dollars per annum, which salary, together with the expense incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Section 8. In case the inspector becomes incapacitated to perform the duties of his office, for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas to depute some competent person recommended by the Board of Examiners to fill the office of inspector until the said inspector shall be able to fulfill the duties of his office and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Section 9. Each of the said inspectors shall reside in the district for which he is appointed, and shall give his whole time and attention to the duties of the office. He shall examine all the collieries in his district as often as his duties will permit or as often as the exigencies of the case or the condition of the mines require it; see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the particulars of the same whenever loss of life or serious personal injury occurs as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury.



the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the result of his labors generally shall be fully set forth.

Section 10. The Board of Examiners, each for its respective district as hereinbefore provided for, in order to divide more equitably among the several mine inspectors the labor to be performed and the territory to be covered by them in the performance of the duties of the office, may, at any time when they shall deem it desirable or necessary, readjust the several districts by the creation of new boundary lines, thereby adding to or taking from, as the case may be, the districts as at present bounded and described, if the court having jurisdiction approve the same.

And in case it shall be deemed desirable or necessary to readjust any contiguous district, comprised by more than one judicial district, by the creation of new boundary lines, then in such case the examining boards of the territory affected or requiring such adjustment, shall, in joint session, make such change or readjustment as they shall jointly agree upon, if the nearest court having jurisdiction to the territory affected to whom the said joint examining boards shall submit the matter, shall approve the same.

Section 11. The mine inspector shall have the right, and it is hereby made his duty to enter, inspect and examine any mine or colliery in his district and the workings and machinery belonging thereto, at all reasonable times, either by day or night, but not so as to impede or obstruct the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the district for which he is appointed, for the purpose of consultation or examination.

He shall also have the right and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights and into all matters and things connected with or relating to, as well as to make suggestions providing for the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Section 12. No person who shall act or practice as a land agent or as the manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery in his district, shall, at the same time, hold the office of inspector of mines under this act.

Section 13. Whenever a petition signed by fifteen or more reputable coal operators or miners, or both, setting forth that any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas of the proper county to issue a citation in the name of the Commonwealth to the said inspector to appear at not less than five days' notice, on a day fixed, before said court and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court find that said inspector is neglectful of his duties or that he is incompetent to perform the duties of the office, for any cause that existed previous to his appointment or that has arisen since his appointment, or that he is guilty of malfeasance in office, the court shall certify the same to the Governor of the Commonwealth, who shall declare the office of inspector for the district vacant and proceed, in compliance with the provisions of this act, to appoint a properly qualified person to fill the office.

The cost of said investigation shall be borne by the removed inspector; but if the allegations in the petition are not sustained the costs shall be paid by the petitioners.

Section 14. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the district for which each inspector has been appointed, and shall be transferred by him with any other property of the Commonwealth that may be in his possession, to his successor in office.

Section 15. The persons who, at the time this act goes into effect, are acting as inspectors of mines under the acts hereby repealed shall continue to act in the same manner as if they had been appointed under this act, and until the term for which they were appointed has expired.

### ARTICLE III.

#### Surveys, Maps and Plans.

Section 1. The owner, operator or superintendent of every coal mine or colliery shall make, or cause to be made, an accurate map or plan of the workings or excavations of such coal mine or colliery, on a scale of one hundred feet to the inch, which map or plan shall exhibit the workings or excavations in each and every seam of coal and the tunnels and passages connecting with such workings or excavations. It shall state in degrees the general inclination of the strata with any material deflection therein in said workings or excavations, and shall also state the tidal elevations of the bottom of each and every shaft, slope, tunnel and gangway, and of any other point in the mine or on the surface where such elevation shall be deemed necessary by the inspector. The map or plan shall show the number of the last survey station and date of each survey on the

gangways or the most advanced workings. It shall also accurately show the boundary lines of the lands of the said coal mine or colliery and the proximity of the workings thereto, and in case any mine contains any water dammed up in any part thereof, it shall be the duty of the owner, operator or superintendent to cause the true location of the said dam to be accurately marked on said map or plan, together with the tidal elevation, inclination of strata and area of said workings containing water, and whenever any workings or excavations is approaching the workings where such dam or water is contained or situated, the owner, operator or superintendent shall notify the inspector of the same without delay.

A true copy of which map or plan the said owner, operator or superintendent shall deposit with the inspector of mines for the district in which the said coal mine or colliery is situated, showing the workings of each seam, if so desired by the inspector, on a separate sheet of tracing muslin. One copy of the said map or plan shall be kept at the colliery.

Section 2. The said owner, operator or superintendent shall, as often as once in every six months place, or cause to be placed, on the said Inspector's map or plan of said coal mine or colliery, the plan of the extensions made in such coal mine or colliery during the preceding six months. The said extensions shall be placed on the inspector's map and the map returned to the inspector within two months from the date of the last survey.

Section 3. When any coal mine or colliery is worked out preparatory to being abandoned, or when any lift thereof is about to be abandoned, the owner, operator or superintendent of such coal mine or colliery shall have the maps or plans thereof extended to include all excavations, as far as practicable, and such portions thereof as have been worked to the boundary lines of adjoining properties; or any part or parts of the workings of which is intended to be allowed to fill with water, must be surveyed in duplicate and such surveys must practically agree, and certified copies be filed with the inspector of the district in which the mines are situated.

Section 4. Whenever the owner, operator or superintendent of any coal mine or colliery shall neglect or refuse, or from any cause not satisfactory to the inspector, shall fail, for a period of three months, to furnish to the inspector the map or plan of said colliery or of the extensions thereto, as provided for in this act, the inspector is hereby authorized to cause an accurate map or plan of such coal mine or colliery to be made at the expense of the owner thereof, which cost shall be recoverable from said owner as other debts are by law recoverable.

Section 5. If the inspector finds or has reason to believe, that any map or plan of any coal mine or colliery, furnished under the provisions of this act, is materially inaccurate, it shall be his duty to make



application to the court of common pleas of the county in which such colliery is situate for an order to have an accurate map or plan of said colliery prepared, and if such survey shall prove that the map furnished was materially inaccurate or imperfect, such owner, operator or superintendent shall be liable for the expense incurred in making the same.

Section 6. If it shall be found that the map or plan furnished by the owner, operator or superintendent was not materially inaccurate or imperfect, the Commonwealth shall be held liable for the expense incurred in making such test survey.

Section 7. If it shall be shown that the said owner, operator or superintendent has knowingly or designedly caused or allowed such map or plan, when furnished, to be incorrect or false, such owner, operator or superintendent thus offending, shall be guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine not exceeding five hundred dollars or imprisonment not exceeding three months, at the discretion of the court.

Section 8. The maps or plans of the several coal mines or collieries in each district and which are placed in the custody of the inspector, shall be the property of the Commonwealth, and shall remain in the care of the inspector of the district in which the said collieries are situated to be transferred by him to his successor in office; and in no case shall a copy of the same be made without the consent of the owner, operator or superintendent.

Section 9. The inspector's map or plan of any particular colliery shall be open for inspection, in the presence of the inspector, to any miner or miners of that colliery, whenever said miner or miners shall have cause to fear that his or their working place or places is becoming dangerous, by reason of its proximity to other workings which may be supposed to contain water or dangerous gases. Said map shall also be open to the inspection and examination of any citizen interested, during business hours.

Section 10. It shall be obligatory on the owners of adjoining coal properties to leave, or cause to be left, a pillar of coal in each seam or vein of coal worked by them, along the line of adjoining property, of such width, that taken in connection with the pillar to be left by the adjoining property owner, will be a sufficient barrier for the safety of the employes of either mine in case the other should be abandoned and allowed to fill with water; such width of pillar to be determined by the engineers of the adjoining property owners together with the inspector of the district in which the mine is situated, and the surveys of the face of the workings along such pillar shall be made in duplicate and must practically agree. A copy of such duplicate surveys, certified to, must be filed with the owners of the adjoining properties and with the inspector of the district in which the mine or property is situated.



## ARTICLE IV.

## Shafts, Slopes, Openings and Outlets.

Section 1. It shall not be lawful for the owner, operator or superintendent of any mine to employ any person or persons in such mine or permit any person or persons to be in such mine for the purpose of working therein, unless they are in connection with every seam or stratum of coal; and from every lift thereof, worked in such mine, not less than two openings or outlets, separated by a strata of not less than sixty (60) feet in breadth underground, and one hundred and fifty (150) feet in breadth at the surface, at which openings or outlets safe and distinct means of ingress and egress are at all times available for the person or persons employed in the said mine, but it shall not be necessary for the said two openings to belong to the same mine if the persons employed therein have safe, ready and available means of ingress and egress by not less than two openings. This section shall not apply to opening a new mine or to opening any new lift of a mine while being worked for the purpose of making communication between said two outlets, so long as not more than twenty persons are employed at any one time in such mine or new lift of a mine; neither shall it apply to any mine or part of a mine in which the second outlet has been rendered unavailable by reason of the final robbing of pillars previous to abandonment, so long as not more than twenty persons are employed therein at any one time. The cage or cages and other means of egress shall, at all times, be available for the persons employed where there is no second outlet.

Section 2. The owner, operator or superintendent of any mine to which there is only one shaft, slope or outlet may petition the court of common pleas in and for the county in which such mine is situated, which said court is hereby empowered to act in the premises, setting forth that, in consequence of intervening lands between the working of his mine and the most practicable point, or the only practicable point, as the case may be, at which to make or bring to the surface from the working of his mine, he is unable to make an additional shaft, slope or outlet in accordance with the requirements of this act, whereupon the court may make an order of reference and appoint three disinterested persons, residents of the county, viewers, one or more of whom shall be a practical mining engineer, all of whom, after being sworn to a faithful discharge of their duties, shall view and examine the premises and determine as to whether the owner shall have the privilege of making an additional outlet through or upon any intervening lands, as the case may require, and report in writing to the court, which report shall be entered and filed of record. If the finding of the viewers, or any two of them, is in favor of the owner of such coal mine or colliery,

he may make an additional shaft, slope or outlet under, through or upon intervening lands, as may be determined upon and provided for by the award. If the finding of the viewers is against the owner, or if no award be made by reason of any default or neglect on the part of the owner, he shall be bound to comply with the provisions of this act in the same manner as if this section had not been enacted. In case the said owner, operator or superintendent desires to, and claims that he ought to make an additional opening under, through or upon any adjoining or intervening lands, to meet the requirements of this act, for the ingress and egress of the men employed in his or their mine, he or they shall make a statement of the facts in the petition, with a survey, setting forth the point of commencement and the point of termination of the proposed outlet which he or they, their engineers, agents or employes may enter upon said intervening lands and survey and mark, as he or they shall find it proper to adopt for such additional outlet, doing as little damage as possible to the property explored; and the viewers shall state in their report what damage will be sustained by the owner or owners of the intervening lands by the opening, constructing and using of the outlet, and if the report is not appealed from, it shall be confirmed or rejected by said court as to right and justice shall appertain, and any further and all proceedings in relation thereto shall be in conformity with like proceedings as in the case of a lateral railroad across or under intervening lands, under the act in relation to lateral railroads, approved the fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto, so far as the provisions of the same are applicable hereto; and the notices to the owner of intervening lands, of the intention to apply for the privilege of making an outlet and meeting of the viewers shall be given, and the costs of the case shall be paid as provided in the said act of fifth day of May, Anno Domini one thousand eight hundred and thirty-two, and the supplements thereto.

Section 3. The escapements, shafts or slopes shall be fitted with safe and available appliances by which the persons employed in the mine may readily escape in case an accident occurs deranging the hoisting machinery at the main outlets.

Section 4. In slopes where the angle of inclination is fifteen degrees or less there must be provided a separate traveling way, which shall be maintained in a safe condition for travel and kept free from steam and dangerous gases.

Section 5. No inflammable structure, other than a frame to sustain pulleys or sheaves, shall be erected over the entrance of any opening connecting the surface with the underground workings of any mine, and no "breaker" or other inflammable structure for the preparation or storage of coal shall be erected nearer than two hun-

dred (200) feet to any such opening, but this act shall not be construed to prohibit the erection of a fan drift for the purpose of ventilation, or of a trestle for the transportation of cars from any slope to such breaker or structure, neither shall it apply to any shaft or slope until the work of development and shipment of coal has commenced: Provided, That this section shall not apply to breakers that are now erected.

Section 6. The top of each shaft and also of each slope, if dangerous, or any intermediate lift thereof, shall be securely fenced off by railing or by vertical or flat gates.

Section 7. Every abandoned slope, shaft, air-hole and drift shall be properly fenced around or across its entrance.

Section 8. All underground entrances to any places not in actual course of working or extension shall be properly fenced across the whole width of such entrances, so as to prevent persons from inadvertently entering the same.

Section 9. The owner, operator or superintendent of any coal mine or colliery which is worked by shaft or slope, shall provide and maintain a suitable appliance by or through which conversation can be held by and between persons at the bottom and at the top of the shaft or slope, and also an efficient means of signaling from the bottom of such shaft or slope to the engineer in charge of the hoisting engine.

Section 10. Hand rails and efficient safety catches shall be attached to, and a sufficient cover overhead shall be provided on every cage used for lowering or hoisting persons in any shaft.

Section 11. Wherever practicable, every cage or gun-boat used for lowering or hoisting persons in any slope, shall be provided with a proper protector, so constructed that persons, while on such cage or gun-boat, shall not be struck by anything which may fall or roll down said slope.

Section 12. The main link of the chain connecting the rope to the cage, gun-boat or car in any shaft or slope, shall be made of the best quality of iron; bridle chains made of the same quality of iron shall be attached to the main link, rope or rope socket from the cross-head of the cage or gun-boat when persons are being lowered or hoisted thereon.

Section 13. The ropes, safety catches, links and chains shall be carefully examined every day they are used, by a competent person delegated for that purpose and any defects therein found, by which life or limb may be endangered, shall be immediately remedied.

Section 14. An efficient brake shall be attached to every drum that is used for lowering or raising persons or material in any mine.

Section 15. Flanges or horns of sufficient dimensions to prevent the rope from slipping off the said drum shall be provided and properly attached to the drum, and all machines used for lowering or



hoisting persons in mines shall be provided with an indicator to show the position of the cage, car or gun-boat in the shaft or slope.

Section 16. Over all shafts which are being sunk or shall hereafter be sunk, a safe and substantial structure shall be erected to sustain the sheaves or pulleys, at a height of not less than twenty (20) feet above the tipping-place, and the top of such shaft shall be arranged in such manner that no material can fall into the shaft while the bucket is being emptied.

Section 17. The said structure shall be erected as soon as a substantial foundation is obtained, and in no case shall a shaft be sunk to a depth of more than fifty (50) feet without such structure.

Section 18. If provision is made to land the bucket upon truck, the said truck shall be constructed in such manner that material cannot fall into the shaft.

Section 19. All rock and coal from shafts as they are being sunk, shall not be raised except in a bucket or on a cage, and such bucket or cage must be connected to the rope or chain by a safety hook, clevis or other safe attachment.

Section 20. Such shafts shall be provided with guides and guide attachments applied in such manner as to prevent the bucket from swinging while descending or ascending therein, and such guides and guide attachments shall be maintained at a distance of not more than seventy-five (75) feet from the bottom of such shaft, until its sinking shall have been completed, but this section shall not apply to shafts one hundred (100) feet or less in depth.

Section 21. Where the strata are not safe every shaft shall be securely cased, lined or otherwise made secure.

Section 22. The following rules shall be observed, as far as practicable, in every shaft to which this act applies.

First. After each and every blast the chargeman must see that all loose material is swept down from the timbers before the workmen descend to their work.

Second. After a suspension of work, and also after firing a blast in a shaft where explosive gases are evolved, the person in charge must have the said shaft examined and tested with a safety lamp before the workmen are allowed to descend.

Third. Not more than four persons shall be lowered or hoisted in any shaft on a bucket at the same time, and no person shall ride on a loaded bucket.

Fourth. Whenever persons are employed on platforms in shafts the person in charge must see that the said platforms are properly and safely constructed.

Fifth. While shafts are being sunk all blasts therein must be exploded by an electric battery.

Sixth. Every person who fails to comply with or who violates the provisions of this article shall be guilty of an offense against this act.

## ARTICLE V.

## Boilers and Connections, Machinery, &amp;c.

Section 1. All boilers used for generating steam in and about mines and collieries shall be kept in good order, and the owner, operator or superintendent shall have them examined and inspected by a qualified person as often as once in six months, and oftener if needed. The result of such examination, under oath, shall be certified in writing to the inspector for the district within thirty (30) days thereafter.

Section 2. It shall not be lawful to place any boiler or boilers, for the purpose of generating steam, under nor nearer than one hundred (100) feet to any coal breaker or other structure in which persons are employed in the preparation of coal: Provided, That this section shall not apply to boilers or breakers already erected.

Section 3. Each nest of boilers shall be provided with a safety valve of sufficient area for the steam to escape and with weights or springs properly adjusted.

Section 4. Every boiler house shall be provided with a steam gauge properly connected with the boilers, to indicate the steam pressure, and another steam gauge shall be attached to the steam pipe in the engine house and placed in such position that the engineer or fireman can readily examine them and see what pressure is carried. Such steam gauges shall be kept in good order, tested and adjusted as often as once in every six months and their condition reported to the inspector in the same manner as the report of boiler inspection.

Section 5. All machinery used in or about the mines and collieries, and especially in breakers, such as engines, rollers, wheels, screens, shafting and belting shall be protected by covering or railing so as to prevent persons from inadvertently walking against or falling upon the same. The sides of stairs, trestles and dangerous plank walks in and around the collieries shall be provided with hand and guard railing to prevent persons from falling over their sides. This section shall not forbid the temporary removal of a fence, guard rail or covering for the purpose of repairs or other operations, if proper precautions are used, and the fence, guard rail or covering is replaced immediately thereafter.

Section 6. A sober and competent person, not under eighteen (18) years of age, shall be engaged to run the breaker engine and he shall attend to said engine while the machinery is in motion.

Section 7. A signal apparatus shall be established at important points in every breaker so that in case of an accident the engineer can be promptly notified to stop the machinery.

Section 8. No person under fifteen (15) years of age shall be appointed to oil the machinery, and no person shall oil dangerous parts of such machinery while it is in motion.



Section 9. No person shall play with, loiter around or interfere with any machinery in or about any mine or colliery.

Section 10. Failure to comply with the provisions of this article shall be deemed an offense against this act.

#### ARTICLE VI.

##### Wash Houses.

Section 1. It shall be the duty of the owner, operator or superintendent of each mine or colliery, at the request in writing of twenty or more men employed in any of the mines, to provide a suitable building, not an engine or boiler house, which shall be convenient to the principal entrance of such mine, for the use of the persons employed therein for the purpose of washing themselves and changing their clothes when entering the mine and returning therefrom. The said building shall be maintained in good order, be properly lighted and heated, and supplied with pure cold and warm water, and shall be provided with facilities for persons to wash. If any person or persons shall neglect or fail to comply with the provisions of this article, or maliciously injure or destroy, or cause to be injured or destroyed, the said building, or any part thereof, or any of the appliances or fittings used for supplying light, heat and water therein, or doing any act tending to the injury or destruction thereof, he or they shall be deemed guilty of an offense against this act.

#### ARTICLE VII.

##### Ambulances and Stretchers.

Section 1. The owner, operator or superintendent of every mine or colliery, except as hereinafter provided, shall provide and keep at such mine or colliery an ambulance and also at least two (2) stretchers, for the purpose of conveying to their places of abode, any person or persons who may be injured while in the discharge of his or their work at such mine or colliery.

Section 2. The said ambulance shall be constructed upon good, substantial and easy springs. It shall be covered and closed and shall have windows on the sides or ends. It shall be of sufficient size to convey at least two (2) injured persons with two (2) attendants at one time, and shall be provided with spring mattresses or other comfortable bedding to be placed on roller frames, together with sufficient covering and protection and convenient movement of the injured. It shall also be provided with seats for the attendants. The stretchers shall be constructed of such material and in such manner as to afford the greatest ease and comfort in the carriage of the injured person.

Section 3. Whenever any person or persons employed in or about a mine or colliery shall receive such injury by accident or otherwise, while so employed, as would render him or them unable to walk to

his or their place of abode, the owner, operator or superintendent of such mine or colliery shall immediately cause such person or persons to be removed to his or their place of abode or to an hospital as the case may require.

Section 4. It is provided, however, that the owner, operator or superintendent of any mine or colliery shall be excepted from the requirements of an ambulance, as aforesaid, if the places of abode of all the workmen at such mine or colliery be within a radius of a half mile from the principal entrance to such mine.

Section 5. It is provided further, that where two or more mines or collieries are located within one mile of each other, or the ambulance is located within one mile of each colliery, but one ambulance, as aforesaid, shall be required, if the said mines or collieries have ready and quick means of communication, one with the other, by telegraph or telephone.

Section 6. An ambulance, as aforesaid, shall not be required at any mine or colliery at which less than twenty (20) persons are employed.

Section 7. In case the distance from any mine or colliery to the place of abode of the person injured, is such as to permit his conveyance to his home or to an hospital more quickly and conveniently by railway, such mode of conveyance shall be permitted, but in such case the conveyance must be under cover and the comfort of the injured person must be provided for.

#### ARTICLE VIII.

##### Certified Mine Foremen.

Section 1. It shall not be lawful, neither shall it be permitted, for any person or persons to act as mine foreman or assistant mine foreman of any coal mines or colliery, unless they are registered as a holder of a certificate of qualification or service under this act.

Section 2. Certificates of qualification to mine foremen and assistant mine foremen shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as hereinafter provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five years' practical experience as a miner, and of good conduct, capability and sobriety.

The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in his department.

Section 3. For the purpose of examination of candidates for such certificates, a board of examiners shall be appointed in each of the inspection districts provided for by this act. The said board shall consist of the district inspector of mines, two (2) practical miners and one owner, operator or superintendent of a mine. The said inspector shall act ex-officio, and the said engineer and owner, operator

or superintendent shall be appointed in like manner and at the same time as the boards of examiners for candidates for mine inspectorship under this act are now appointed. The said board shall act as such for the period of one year from the date of their appointment. Meetings of the board may be held at any time, and they may make such rules and conduct such examinations as in their judgment may seem proper for the purpose of such examinations. The said board shall report their action to the Secretary of Internal Affairs, and at least three (3) of the members thereof shall certify to the qualification of each candidate who has passed such examination. The traveling expenses of the members of such board to and from their place of meeting, together with the sum of five dollars per day each to the said two (2) practical miners and owner, operator or superintendent, members of each board, for each day they are actually engaged therein, not exceeding ten (10) days in all, during the year, shall be paid by the Commonwealth on an order of the Auditor General drawn on the State Treasurer upon the certificate of the mine inspector, member of such board.

Section 4. Certificates of qualification to mine foreman and assistant mine foreman shall be granted by the Secretary of Internal Affairs to every applicant who may be reported by the examiners, as heretofore provided, as having passed a satisfactory examination and as having given satisfactory evidence of at least five (5) years' practical experience as a miner, and of good conduct, capability and sobriety. The certificate shall be in manner and form as shall be prescribed by the Secretary of Internal Affairs, and a record of all certificates issued shall be kept in the department. Certificates of qualification and certificate of service shall contain the full name, age and place of birth of the applicant, as also the length and nature of his previous service in or about the mines.

Section 5. Before certificate as aforesaid shall be granted applicants for same shall pay to the Secretary of Internal Affairs the following fee, namely:

For examination, one dollar; for registration of certificate, one dollar, for certificate, one dollar. All fees so received shall be covered into the treasury of the Commonwealth.

Section 6. No mines shall be operated for a longer period than thirty days without the supervision of a mine foreman. In case any mine is worked a longer period than thirty (30) days without such certified mine foreman, the owner, operator or superintendent thereof shall be subject to a penalty of twenty dollars per day for each day over the said thirty (30) days during which the said mine is operated.

Section 7. In case of the loss or destruction of a certificate the Secretary of Internal Affairs may supply a copy thereof to the person losing the same upon the payment of the sum of fifty (50) cents: Pro-



vided. It shall be shown to the satisfaction of the Secretary that the loss has actually occurred.

Section 8. If any person or persons shall forge or counterfeit a certificate or knowingly make or cause to be made any false statement in any certificate under this act, or in any official copy of the same, or shall urge others to do so, or shall utter or use any such forged or false certificate, or unofficial copy thereof, or shall make, give, utter, produce or make use of any false declaration, representation or statement in any such certificate or copy thereof, or any document containing the same, he or they shall be guilty of a misdemeanor, and upon conviction thereof, shall be fined two hundred dollars, or imprisoned for a term not exceeding one (1) year, or both, at the discretion of the court trying the case.

Section 9. And no person shall be permitted to act as fire boss in any coal mine or colliery, except he has had five (5) years' practical experience in mines as a miner, three (3) of which he shall have as a miner wherein noxious and explosive gases are evolved, and the said fire boss shall certify to the same before entering upon his duties, before an alderman, justice of the peace or other person authorized to administer oaths, and a copy of said deposition shall be filed with the district inspector of mines wherein said person is employed.

#### ARTICLE IX.

##### Employment of Boys and Females.

Section 1. No boy under the age of fourteen (14) years, and no woman or girl of any age, shall be employed or permitted to be in any mine for the purpose of employment therein. Nor shall a boy under the age of twelve years or a woman or girl of any age, be employed or permitted to be in or about the outside structures or workings of a colliery for the purpose of employment, but it is provided, however, that this prohibition shall not affect the employment of a boy or female of suitable age in an office or in the performance of clerical work at a colliery.

Section 2. When an employer is in doubt as to the age of any boy or youth applying for employment in or about a mine or colliery, he shall demand and receive proof of the said lawful employment age of such boy or youth, by certificate from the parent or guardian, before said boy or youth shall be employed.

Section 3. If any person or persons contravene or fail to comply with the provisions of this act in respect to the employment of boys, young male persons or females, or if he or they shall connive with or permit others to contravene or fail to comply with said provisions, or if a parent or guardian of a boy or young male person make or give a false certificate of the age of such boy or young male person, or knowingly do or perform any other act for the purpose of secur-

ing employment for a boy or young male person under the lawful employment age and in contravention of the provisions of this act, he or they shall be guilty of an offense against this act.

#### ARTICLE X.

##### Ventilation.

Section 1. The owner, operator or superintendent of every mine shall provide and maintain a constant and adequate supply of pure air for the same, as hereinafter provided.

Section 2. It shall not be lawful to use a furnace for the purpose of ventilating any mine wherein explosive gases are generated.

Section 3. The minimum quantity of air thus produced, shall not be less than two hundred (200) cubic feet per minute for each and every person employed in any mine, and as much more as the circumstances may require.

Section 4. The ventilating currents shall be conducted and circulated to and along the face of each and every working place throughout the entire mine, in sufficient quantities to dilute, render harmless and sweep away smoke and noxious or dangerous gases, to such an extent that all working places and traveling roads shall be in a safe and fit state to work and travel therein.

Section 5. All worked out or abandoned parts of a mine in operation, so far as practicable, shall be kept free of dangerous bodies of gases or water, and if found impracticable to keep the entire mine free from an accumulation of gases or water, the mine inspector must be immediately notified.

Section 6. Every mine employing more than seventy five (75) persons must be divided into two or more districts. Each district shall be provided with a separate split of pure air and the ventilation shall be so arranged, that not more than seventy-five persons shall be employed at the same time in any one current or split of air.

The inlet and return air passages for any particular district must be separated by a pillar of coal or stone, if the thickness and dip of the vein will permit, except where it is necessary to cut through said dividing pillar for the purposes of ventilation, traffic or drainage.

Section 7. All air passages shall be of sufficient area to allow the free passage of not less than two hundred (200) cubic feet of air per minute for every person working therein; and in no case, in mines generating explosive gases, shall the velocity exceed four hundred and fifty (450) lineal feet per minute, in any opening through which the air currents pass, if gauze safety lamps are used, except in the main inlet or outlet air ways.

Section 8. All cross-cuts connecting the main inlet and outlet air passages of every district, when it becomes necessary to close them permanently, shall be substantially closed with brick or other



suitable building material, laid in mortar or cement whenever practicable, but in no case shall said air stoppings be constructed of plank except for temporary purposes.

Section 9. All doors used in assisting or in any way affecting the ventilation shall be so hung and adjusted that they will close automatically.

Section 10. All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through.

Section 11. All main doors shall be so placed that when one door is open, another, which has the same effect upon the same current, shall be and remain closed and thus prevent any temporary stoppage of the air current.

Section 12. An extra main door shall be so placed and kept standing open, so as to be out of reach of accident, and so fixed that it can be at once closed in the event of an accident to the doors in use.

Section 13. The frame work of such main doors shall be substantially secured in stone or brick, laid in mortar or cement unless otherwise permitted in writing by the inspector.

Section 14. All permanent air bridges shall be substantially built of such material and such strength as the circumstances may require.

Section 15. The quantities of air in circulation shall be ascertained with an anemometer or other efficient instrument; such measurements shall be made by the inside foreman or his assistant once a week at the inlet and outlet airways, also at or near the face of each gangway and at the nearest cross-heading to the face of each gangway and at the nearest cross-heading to the face of the inside and outside chamber or breast where men are employed, and the headings shall not be driven more than sixty (60) feet from the face of each chamber or breast and shall be entered in the colliery report book.

Section 16. A report of these air measurements shall be sent to the inspector before the twelfth day of each month, for the preceding month, together with a statement of the number of persons employed in each district.

Section 17. All ventilators used at mines shall be provided with recording instruments by which the speed of the ventilators or the ventilating pressure shall be registered for each hour, and such data shall be preserved at the colliery for future reference, for a period of three months.

Section 18. Any person or persons who shall neglect or fail to comply with the provisions of this article, or who shall make any false report in regard to air measurements, shall be guilty of an offense against this act.

## ARTICLE XI.

## Props and Timbers.

Section 1. It shall be the duty of the owner, operator, superintendent or mine foreman of every mine to furnish to the miners all props, ties, rails and timbers necessary for the safe mining of coal and for the protection of the lives of the workmen. Such props, ties, rails and timbers shall be suitably prepared and shall be delivered to the workmen as near to their working places as they can be conveyed in ordinary mine cars, free of charge.

Section 2. Every workman in want of props, ties, rails or timbers shall notify the mine foreman or his assistant of the fact at least one day in advance, giving the length of the props or timber required; and in case of danger from loose roof or sides, he shall not continue to cut or load coal until the said props and timber have been properly furnished and the place made secure.

Section 3. A failure to comply with the provisions of this article shall be deemed an offense against this act, and shall be taken to be negligence per se on the part of the owner, operator, superintendent or mine foreman, as the case may be, of such mine, in action for the recovery of damages for accidents resulting from the insufficient propping of such mine, through failure to furnish the necessary props or timbers.

## ARTICLE XII.

## General Rules.

The following general rules shall be observed in every mine to which this act applies:

Rule 1. The owner, operator or superintendent of a mine or colliery shall use every precaution to ensure the safety of the workmen in all cases, whether provided for in this act or not, and he shall place the underground workings thereof, and all that is related to the same, under the charge and daily supervision of a competent person who shall be called "mine foreman."

Rule 2. Whenever a mine foreman cannot personally carry out the provisions of this act so far as they pertain to him, the owner, operator or superintendent shall authorize him to employ a sufficient number of competent persons to act as his assistants, who shall be subject to his orders.

Rule 3. The mine foreman shall have charge of all matters pertaining to ventilation, and the speed of the ventilators shall be particularly under his charge and direction; and any superintendent who shall cause the mine foreman to disregard the provisions of this act shall be amenable in the same manner as the mine foreman.

Rule 4. All accessible parts of an abandoned portion of a mine in which explosive gases have been found, shall be carefully examined

by the mine foreman or his assistants at least once a week, and all danger found existing therein shall be immediately removed. A report of said examination shall be recorded in a book kept at the colliery for that purpose and signed by the person making the same.

Rule 5. In mines generating explosive gases, the mine foreman or his assistant shall make a careful examination every morning of all working places and traveling roads and all other places which might endanger the safety of the workmen, before the workmen shall enter the mine, and such examination shall be made with a safety lamp within three (3) hours at most, before time for commencing work, and a workman shall not enter the mine or his working place until the said mine or part thereof and working place are reported to be safe. Every report shall be recorded without delay in a book which shall be kept at the colliery for the purpose and shall be signed by the person making the examination.

Rule 6. The person who makes said examination shall establish proof of the same by marking plainly the date thereof at the face of each working place and all other places examined.

Rule 7. A station or stations shall be established at the entrance to each mine or different parts of each mine, as the case may require, and a workman shall not pass beyond any such station until the mine or part of the mine beyond the same has been inspected and reported to be safe. It shall be the duty of the fire boss to remain at the danger station until relieved by some person authorized by himself or the mine foreman, who shall stand guard until said mine or part of mine shall be reported safe, and he shall not let any person pass without permission from the fire boss.

Rule 8. If at any time it is found by the person for the time being in charge of the mine or any part thereof, that by reason of noxious gases prevailing in such mine or such part thereof, or of any cause whatever the mine or the said part is dangerous, every precaution shall be used to ensure the safety of the workmen; and every workman, except such persons as may be required to remove the danger, shall be withdrawn from the mine, or such part thereof as is so found dangerous, until the said mine or said part thereof is examined by a competent person and reported by him to be safe.

Rule 9. In every working approaching any place where there is likely to be accumulation of explosive gases, or in any working in which danger is imminent from explosive gases, no light or fire other than a locked safety lamp shall be allowed or used. Whenever safety lamps are required in any mine they shall be the property of the owner of said mine, and a competent person, who shall be appointed for the purpose, shall examine every safety lamp immediately before it is taken into the workings for use, and ascertain it to be clean, safe and securely locked, and safety lamps shall not be used until they



have been so examined and found safe, clean and securely locked, unless permission be first given by the mine foreman to have the lamps used unlocked.

Rule 10. No one, except a duly authorized person, shall have in his possession a key or any other contrivance for the purpose of unlocking any safety lamp in any mine where locked lamps are used. No lucifer matches or any other apparatus for striking light shall be taken into said mine or parts thereof.

Rule 11. No blast shall be fired in any mine where locked safety lamps are used except by permission of the mine foreman or his assistants, and before a blast is fired, the person in charge must examine the place and adjoining places and satisfy himself that it is safe to fire such blast before such permission is given.

Rule 12. The mine foreman or his assistant shall visit and examine every working place in the mine at least once every alternate day, while the men of such place are or should be at work, and shall direct that each and every working place is properly secured by props or timber, and that safety in all respects is assured by directing that all loose coal or rock shall be pulled down or secured, and that no person shall be permitted to work in an unsafe place unless it be for the purpose of making it secure.

Rule 13. The mine foreman, or some other competent person or persons to be designated by him, shall examine at least once every day all slopes, shafts, main roads, traveling ways, signal apparatus, pulleys and timbering and see that they are in safe and efficient working condition.

Rule 14. Any person having charge of a working place in any mine shall keep the roof and sides thereof properly secured by timber or otherwise so as to prevent such roof and sides from falling, and he shall not do any work or permit any work to be done under loose or dangerous material except for the purpose of securing the same.

Rule 15. Whenever a place is likely to contain a dangerous accumulation of water, the working approaching such place shall not exceed twelve (12) feet in width, and there shall be constantly kept, at a distance of not less than twenty (20) feet in advance, at least one (1) bore hole near the center of the working and sufficient flank bore holes on each side.

Rule 16. No person shall ride upon or against any loaded car, cage or gun-boat in any shaft, slope or plane in or about a mine or colliery.

Rule 17. Not more than ten (10) persons shall be hoisted or lowered at any one time in any shaft or slope, and whenever five persons shall arrive at the bottom of any shaft or slope in which persons are regularly hoisted or lowered they shall be furnished with an empty car or cage and be hoisted, except however, in mines where there is

provided a traveling way having an average pitch of fifteen (15) degrees or less and not more than one thousand (1,000) feet in length. This, however, shall not prohibit the hoisting or lowering of twenty (20) persons at one time on slopes where two (2) or more loaded cars are regularly hoisted: Provided, That not less than thirty (30) workmen working therein, make such request in writing, to the inspector of the district, and if, in his judgment, the hoisting appliances in every respect are of sufficient strength, he may comply with the request of the workmen.

Provided, That in any coal mine or colliery where the hoisting appliances are not of sufficient strength to hoist or lower the number of persons named, he shall have the power to reduce the number of persons to be hoisted or lowered.

Rule 18. An engineer placed in charge of an engine whereby persons are hoisted or lowered in any mine, shall be a sober and competent person of not less than twenty-one (21) years of age.

Rule 19. Every engineer shall work his engine slowly and with great care when any person is being lowered or hoisted in a shaft or slope and no one shall interfere with or intimidate him while in the discharge of his duties.

Rule 20. An engineer who has charge of the hoisting machinery by which persons are lowered or hoisted in a mine, shall be in constant attendance for that purpose during the whole time any person or persons are below ground, and he shall not allow any person or persons, except such as may be deputed by the owner, operator or superintendent, to handle or meddle with the engine under his charge or any part of its machinery.

Rule 21. When any person is about to descend or ascend a shaft or slope, the headman or footman, as the case may be, shall inform the engineer by signal or otherwise of the fact, and the engineer shall return a signal before moving or starting the engine. In the absence of a headman or footman the person or persons about to descend or ascend shall give and receive the signals in the same manner.

Rule 22. The owner, operator or superintendent of a colliery shall place a competent person to be called "outside foreman," in charge of the breaker and the outside work of such colliery and who shall direct, and as far as practicable, see that the provisions of this act are complied with in respect to the breaker, outside machinery, ropes, cages and all other things pertaining to the outside work, unless otherwise provided for in this act.

Rule 23. In all coal breakers where the coal dust is so dense as to be injurious to the health of persons employed therein, the owner, operator or superintendent of said breaker shall, upon the request of the inspector, immediately adopt measures for the removal of the dust, as far as practicable.



Rule 24. Any miner or other workman who shall discover anything wrong with the ventilating current or with the condition of the roof, side, timber or roadway, or with any other part of the mine in general, such as would lead him to suspect danger to himself or his fellow workmen or to the property of his employer, shall immediately report the same to the mine foreman or other person, for the time being in charge of that portion of the mine.

Rule 25. Any person or persons who shall knowingly or wilfully damage, or without proper authority, remove or render useless any fencing, means of signaling, apparatus, instrument or machine, or shall throw open or obstruct any airway, or open a ventilating door and not have the same closed, or enter a place in or about a mine against caution, or carry fire, open lights or matches in places where safety lamps are used, or handle without proper authority, or disturb any machinery or cars, or do any other act or thing whereby the lives or health of persons or the security of the property in or about a mine or colliery are endangered, shall be guilty of an offense against this act.

Rule 26. Gunpowder or any other explosive shall not be stored in a mine, and a workman shall not have at any time in any one place, more than one keg or box containing twenty-five (25) pounds, unless more is necessary for a person to accomplish one day's work.

Rule 27. Every person who has gunpowder or other explosive in a mine, shall keep it in a wooden or metallic box securely locked, and such box shall be kept at least ten (10) feet from the tracks in all cases where room at such a distance is available.

Rule 28. Whenever a workman shall open a box containing explosive or while in any manner handling the same, he shall first place his lamp not less than five (5) feet from such explosive and in such a position that the air current cannot convey sparks to it, and a workman shall not approach nearer than five (5) feet to an open box containing powder, with a lamp, lighted pipe or any other thing containing fire.

Rule 29. When high explosives other than gunpowder are used in any mine, the manner of storing, keeping, moving, charging and firing or in any manner using such explosives, shall be in accordance with special rules as furnished by the manufacturers of the same. The said rules shall be endorsed with his or their official signature and shall be approved by the owner, operator or superintendent of the mine in which such explosives are used.

Rule 30. In charging holes for blasting in slate or rock in any mine, no iron or steel-pointed needle shall be used, and a tight cartridge shall not be rammed into a hole in coal, slate or rock with an iron or steel tamping bar, unless the end of the tamping bar is tipped with at least six (6) inches of copper or other soft metal.

Rule 31. A charge of powder or any other explosive in slate or rock which has missed fire shall not be withdrawn or the hole reopened.

Rule 32. A miner or other person who is about to explode a blast by the use of patent or other squibs or matches, shall not shorten the match, nor saturate it with mineral oil, nor turn it down when placed in the hole, nor ignite it except at its extreme end, nor do anything tending to shorten the time the match will burn.

Rule 33. When a workman is about to fire a blast he shall be careful to notify all persons who may be in danger therefrom, and shall give sufficient alarm before and after igniting the match so that any person or persons who may be approaching shall be warned of the danger.

Rule 34. Before commencing work and also after the firing of every blast, the miner working a breast or any other place in a mine, shall enter such breast or place to examine and ascertain its condition, and his laborer or assistant shall not go to the face or such breast or place until the miner has examined the same and found it to be safe.

Rule 35. No person shall be employed to blast coal or rock unless the mine foreman is satisfied that such person is qualified, by experience and judgment, to perform the work with ordinary safety.

Rule 36. A person who is not a practical miner shall not charge or fire a blast in the absence of an experienced miner, unless he has given satisfactory evidence of his ability to do so with safety, and has obtained permission from the mine foreman or person in charge.

Rule 37. An accumulation of gas in mines shall not be removed by brushing where it is practicable to remove it by brattice.

Rule 38. When gases ignited by blast or otherwise, the person igniting the same shall immediately extinguish it, if possible, and notify the mine foreman or his assistant of the fact, and workmen must see that no gas blowers are left burning upon leaving their working places.

Rule 39. Every fireman in charge of a boiler or boilers for the generation of steam, shall keep a constant watch of the same. He shall see that the steam pressure does not at any time exceed the limit allowed by the outside foreman or superintendent. He shall frequently try the safety valve, and shall not increase the weight on the same. He shall maintain a proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the foreman, for the time being in charge, and take such other action as may under the particular circumstances be necessary for the protection of life and preservation of property.

Rule 40. At every shaft or slope in which provision is made in this act for lowering and hoisting persons, a headman and footman

shall be designated by the superintendent or foreman to be at their proper places from the time that persons begin to descend, until all the persons who may be at the bottom of said shaft or slope when quitting work shall be hoisted. Such headman and footman shall personally attend to the signals and see that the provisions of this act, in respect to lowering and hoisting persons in shafts or slopes, shall be complied with.

Rule 41. No person, except the man giving the signal, shall jump on a car, cage or gunboat after the signal to start has been given, and if any person should enter a car, cage or gunboat in excess of the lawful number the headman or footman shall notify him of the fact and request him to get off, which request must be immediately complied with. Any violation of this rule must be reported promptly to the mine foreman.

Rule 42. An empty trip shall be hoisted in any shaft or slope where the engine has been standing idle for an hour or more, before men are hoisted or lowered in said shafts or slopes, and no person or persons shall ascend any shaft or slope when working on the night turn, until one trip shall first be hoisted therein.

Rule 43. Every passage-way used by persons in any mines and also used for transportation of coal or other material, shall be made of sufficient width to permit persons to pass moving cars with safety, but if found impracticable to make any passage-way of sufficient width, then holes of ample dimensions, and not more than one hundred and fifty (150) feet apart, shall be made on one side of said passage-way. The said passage-way and safety holes shall be kept free from obstructions and shall be well drained; the roof and sides of the same shall be made secure.

Rule 44. When locomotives are used in any mine their speed shall not exceed six (6) miles per hour, and an efficient alarm shall be provided and attached to the front end of every train of cars pushed by a locomotive in any mine or part of a mine.

Rule 45. Locomotives propelled by steam, if using fire, shall not be used in any passage-way which is also used as an in-take air-way to any mine or part of a mine where persons are employed, unless there be a sufficient quantity of air circulating therein to maintain a healthy atmosphere.

Rule 46. No person shall couple or uncouple loaded or empty cars while the same are in motion: Provided however, That this shall not apply to the top or bottom men of slopes, planes or shafts.

Rule 47. When cars are run on gravity roads by breaks or sprags, the runner shall only ride on the rear end of the last car, and when said cars are run by sprags, a space of not less than two (2) feet from the body of the car shall be made on one or both sides of the track, wherever it may be necessary for the runner to pass along the side



of the moving car or cars, and said space or passage-way shall always be kept free from obstructions.

Rule 48. No miner or laborer shall run cars out of any breast or chamber or on any gravity road unless he is a suitable person, employed by the mine foreman for that particular work; and no person shall be employed by any mine foreman to perform such work, under the age of sixteen (16) years.

Rule 49. Safety holes shall be made at the bottom of all slopes and planes and be kept free from obstruction to enable the footman to escape readily in case of danger.

Rule 50. Safety blocks or some other device for the purpose of preventing cars from falling into a shaft or running away on a slope or plane, shall be placed at or near the head of every shaft, slope or plane, and said safety blocks or other device must be maintained in good working order.

Rule 51. No person shall travel on any gravity train while cars are being hoisted or lowered thereon. Whenever ten (10) persons arrive at the bottom or top of any plane on which it is necessary for men to travel, traffic thereon shall be suspended for a period of time long enough to permit them to reach the top or bottom of said plane.

Rule 52. No mine cars shall be used in any mine unless the bumpers are of sufficient length and width to keep the bodies of said cars separated by not less than twelve (12) inches when the cars stand on a straight level road and the bumpers touch each other.

Rule 53. It shall be the duty of the owner, operator or superintendent of any or all coal breakers, to have them properly heated in order to prevent injury to the health of persons employed therein.

Rule 54. For the purpose of making known the rules and the provisions of this act to all persons employed in or about such mine or colliery to which this act applies, an abstract of the act and rules shall be posted up in legible characters in some conspicuous place or places at or near the mine or colliery, where they may be conveniently read by the persons employed, and so often as the same becomes obliterated or destroyed the owner, operator or superintendent shall cause them to be renewed with all reasonable dispatch. Any person who pulls down, injures or defaces such abstract of the act or rules when posted up in pursuance to the provisions of this act, shall be guilty of an offense against this act.

Rule 55. No person or persons working in any coal mine or colliery shall cut any props or timbers while the same are in position to support the roof or sides. When it becomes necessary to remove any of the said props or timbers for the purpose of mining coal that may be supported by the same, to dislodge any of the said props or timbers, it must be done by blasting.

Rule 56. It shall not be lawful for any mine foreman or superintendent of any mine or colliery to employ any person who is not com-

petent to understand the regulations of any mine evolving explosive gases: Provided, That this rule will not apply to a section of mine, free from the said explosive gases.

Rule 57. Any superintendent or mine foreman who prevents the footman from giving an empty car or cage to the number of men designated in a former rule, shall, upon information by any person engaged in the mines, given the mine inspector, be fined the sum of fifty dollars for each offense.

Rule 58. Every person who fails to comply with any of the foregoing rules or any of the provisions of this article, shall be guilty of an offense against this act.

### ARTICLE XIII.

#### Inquests.

Section 1. Whenever loss of life to a miner or other employe occurs in or about a mine or colliery, notice thereof shall be given promptly to the inspector of mines for the district in which the accident occurred, by the mine foreman or outside foreman or other person having immediate charge of the work at the time of the accident; and when death results from personal injury such notice shall be given promptly after the knowledge of death comes to the said foreman or person in charge.

Section 2. Whenever loss of life occurs or whenever the lives of persons employed in a mine or at a colliery are in danger from any accident, the inspector of mines shall visit the scene of the accident as soon as possible thereafter and offer such suggestions, as in his judgment shall be necessary, to protect the lives and secure the safety of the persons employed. In case of death from such accident, and after examination he finds it necessary that a coroner's inquest shall be held, he shall notify the coroner to hold such inquest without delay, and if no such inquest be held by the coroner within twenty-four (24) hours after such notice, the inspector shall institute a further and fuller examination of such accident, and for this purpose he shall have power to compel the attendance of witnesses at such examination and to administer oaths and affirmations to persons testifying thereat. The inspector shall make a record of all such investigations and accidents, which record shall be preserved in his office. The costs of such investigation shall be paid by the county in which the accident occurred in like manner as costs of inquests held by coroners or justices of the peace are now paid.

Section 3. An inquest held by the coroner upon the body of a person killed by explosion or other accident, shall be adjourned by the coroner if the inspector of mines be not present to watch the proceedings, and the coroner in such case shall notify the inspector, in



writing, of such adjourned inquest, and the time and place of holding the same, at least three (3) days previous thereto.

Section 4. Due notice of an intended inquest to be held by the coroner, shall be given by the coroner to the inspector, and at any such inquest the inspector shall have the right to examine witnesses.

Section 5. If, at any inquest held over the body or bodies of persons whose death was caused by an accident in or about a mine or colliery, the inspector be not present, and it is shown by the evidence given at the inquest that the accident was caused by neglect or by any defect in or about the mine or colliery, which in the judgment of the jury, requires a remedy, the coroner shall send notice in writing to said inspector of such neglect or default.

Section 6. No person who is interested personally, nor a person employed in the mine or at a colliery in or at which loss of life has occurred by accident, shall be qualified to serve on a jury empaneled on the inquest, and a constable or other officer shall not summons such a person so qualified as juror, but the coroner shall empanel a majority of the jury from miners who are qualified to judge of the nature of the accident; every person who fails to comply with the provisions of this article shall be guilty of an offense against this act.

#### ARTICLE XIV.

##### Returns, Notices, Et Cetera.

Section 1. Notices of death or serious injuries resulting from accidents in or about mines or collieries, shall be made to the inspector of mines, in writing, and shall specify the name, age and occupation of the person killed or injured, and also the nature and character of the accident and of the injury caused thereby.

Section 2. The owner, operator or superintendent of a mine or colliery, shall, without delay, give notice to the inspector of the district in which said mine or colliery is situated in any or all of the following cases:

First. Where any working is commenced for the purpose of opening a new slope or mine to which this act applies.

Second. Where any mine is abandoned or the workings thereof discontinued.

Third. Where the working of any mine is recommenced after any abandonment or discontinuance for a period exceeding three months.

Fourth. Where any new coal breaker is completed and work commenced therein for the purpose of preparing coal for market.

Fifth. Where the pillars of a mine are to be removed or robbed.

Sixth. Where a squeeze or crush or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs or a dangerous body of gas is found in any mine.

Section 3. On or before the first day of February in each year, the owner, operator or superintendent of every mine or colliery, shall send to the inspector of the district, a correct report specifying with respect to the year ending December thirty-first, previously, the name of the operator and officials of the mine, with his postoffice address; the quantity of coal mined, the amount of powder or other explosives consumed; the number of persons employed above and below ground in or about such colliery, classifying the persons so employed. The report shall be in such form as may be from time to time prescribed by the inspectors of the district. Blank forms for said reports shall be furnished by the Commonwealth.

#### ARTICLE XV.

##### Injunctions.

Section 1. Upon application of the inspector of mines of the proper district, acting in behalf of the Commonwealth, any of the courts of law or equity having jurisdiction where the mine or colliery proceeded against is situated, whether any proceedings have or have not been taken, shall prohibit, by injunction or otherwise, the working of any mine or colliery in which any person is employed or is permitted to be for the purpose of working in contravention of the provisions of this act, and may award such costs in the matter of the injunctions or other proceedings as the court may think just; but this section shall be without prejudice to any other remedy permitted by law for enforcing the provisions of this act. Written notice of the intention to apply for such injunction in respect to any mine or colliery, shall be made to the owner, operator or superintendent of such mine or colliery not less than twenty-four (24) hours before the application is made.

#### ARTICLE XVI.

##### Arbitration.

Section 1. Whenever an inspector finds any mine or colliery or part thereof, or any matter, thing or practice connected with such mine, which in any respect thereof is not covered by or provided against by any provisions of this act or by any rule, to be dangerous or defective, or in his judgment tends to bodily injury to a person, he shall give notice thereof in writing to the owner, operator or superintendent of such mine or colliery, stating in such notice the particular matter or defect requiring remedy and may demand that the same be remedied; but the owner, operator or superintendent of said mine or colliery shall have the right to refer the demand of the inspector to a board of arbitration, and the matter shall then be arbitrated within forty-eight (48) hours of the time such complaint or demand be made. And the party against whom the award is given shall pay

all cost attending the case. The said board of arbitration shall be composed of three (3) persons, one of whom shall be chosen by the inspector, one by the said owner, operator or superintendent and a third by the two thus selected, and the decision of a majority of such board shall be final and binding in the matter.

## ARTICLE XVII.

### Penalties.

Section 1. Any judge of the court of quarter sessions of the peace of the county in which the mine or colliery, at which the offense, act or omission as hereinafter stated has occurred, is situated, is hereby authorized and required, upon the presentation to him of the affidavit of any citizen of the Commonwealth setting forth that the owner, operator or superintendent, or any other person employed in or about such mine or colliery had been negligently guilty of an offense against the provisions of this act, whereby a dangerous accident had resulted or might have resulted to any person or persons employed in such mine or colliery, to issue a warrant to the sheriff of said county directing him to cause such person or persons to be arrested and brought before said judge, who shall hear and determine the guilt or innocence of the person or persons so charged; and if convicted he or they shall be sentenced to pay a fine not exceeding five hundred dollars, in all cases not otherwise provided for in this act, or an imprisonment in the county jail for a period not exceeding three (3) months, or both, at the discretion of the court: Provided, That any defendant may waive trial before a judge as herein provided and at any time, at or before the time of such trial, demand a trial by a jury in the court of quarter sessions, in which case he may enter into a recognizance before said judge with such surety or sureties and in such sum as said judge may approve, conditioned for his appearance at the next court of quarter sessions to answer the charge against him and abide the orders of the court in the premises, meanwhile to be of good behavior and keep the peace, or in default of such recognizance to be committed to the county jail to await such trial.

Section 2. If any person shall feel himself aggrieved by such conviction and sentence before a judge as aforesaid, he may appeal therefrom subject to the following conditions, namely: The appellant shall, within seven days after the decree has been made, give notice to the prosecutor of his intention to appeal, and within the same time enter into a recognizance, with such surety or sureties and in such sum as shall be approved by said judge, conditioned to appear and try such appeal before the next court of quarter sessions of the peace and to abide the judgment of the court thereon and to pay



all such costs and penalties as may be there awarded, and upon the compliance with such conditions the judge shall release the appellant from custody pending the appeal.

Section 3. Nothing in this act shall prevent any person from being indicted or liable under any other act, to any higher penalty or punishment than is herein provided, and if the court before whom any such proceeding is had shall be of the opinion that proceedings ought to be taken against such persons under any other act, or otherwise, he may adjourn the case to enable such proceedings to be taken.

Section 4. All offenses under this act are declared to be misdemeanors and in default of payment of any penalty or cost by the party or parties sentenced to pay the same, he or they may be imprisoned for a period not exceeding three (3) months and not less than thirty (30) days.

Section 5. For any violation of duty by the mine inspector prescribed by this act, he shall be deemed guilty of a misdemeanor, and upon conviction, be sentenced to pay a fine of not more than three hundred dollars or be imprisoned for a period not exceeding three months, or either, or both, at the discretion of the court.

Section 6. All fines imposed under this act shall be paid into the county treasury for the use of the county.

Section 7. No conviction or acquittal under this act, in any complaint, shall be received in evidence upon the trial of any action for damages arising from the negligence of any owner, operator or superintendent or employe in any mine or colliery.

Section 8. That for any injury to person or property occasioned by any violation of this act or any failure to comply with its provisions by any owner, operator, superintendent, mine foreman or fire boss of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby; and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost, for like recovery of damages for the injury they shall have sustained.

#### ARTICLE XVIII.

##### Definition of Terms.

In this act, unless the context otherwise requires, the term "coal mine or colliery" includes every operation and work, both under ground and above ground, used or to be used for the purpose of mining and preparing coal.

The term "workings" includes all the excavated parts of a mine, those abandoned as well as the places actually at work.

The term "mine" includes all underground workings and excavations and shafts, tunnels and other ways and openings; also all such



shafts, slopes, tunnels and other openings in course of being sunk or driven, together with all roads, appliances, machinery and materials connected with the same below the surface.

The term "shaft" means a vertical opening through the strata and which is or may be used for the purpose of ventilation or drainage or for hoisting men or material in connection with the mining of coal.

The term "slope" means any inclined way or opening used for the same purpose as a shaft.

The term "breaker" means the structure containing the machinery used for the preparation of coal.

The term "owners" and "operators" means any person or body corporate who is the immediate proprietor or lessee or occupier of any coal mine or colliery or any part thereof. The term "owner" does not include a person or body corporate who merely receives a royalty, rent or fine from a coal mine or colliery or part thereof, or is merely the proprietor of the mine subject to any lease, grant or license for the working or operating thereof, or is merely the owner of the soil and not interested in the minerals of the mine or any part thereof. But any "contractor" for the working of a mine or colliery or any part or district thereof, shall be subject to this act as an operator or owner, in like manner as if he were the owner.

The term "superintendent" means the person who shall have, on behalf of the owner, general supervision of one or more mines or collieries.

#### ARTICLE XIX.

All laws or parts of laws inconsistent or in conflict with the provisions of this act are hereby repealed.

Approved—The 2d day of June, A. D. 1891.

ROBT. E. PATTISON.

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#### AN ACT

Equalizing and fixing the compensation and mileage of the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment as inspectors, foremen and fire bosses, respectively, in the anthracite coal mines, and providing for the employment and compensation and mileage of a clerk to each of said boards.

Section 1. Be it enacted, &c., That from and after the passage of this act the members of the several boards appointed under the provisions of the act approved June second, one thousand eight hundred and ninety-one, to examine candidates for appointment respectively as inspectors and foremen of anthracite coal mines, shall re-

ceive in lieu of all compensation, mileage, expenses, emoluments or allowances heretofore paid them, as follows: Six dollars per day for each day during which the said members shall be actually in attendance on the sessions of the board, and mileage at the rate of five cents for each mile actually traveled going from the home of the member to the place of meeting of the board and returning from said place to his said home by the shortest practicable railway route: Provided, That mileage shall be paid but once for each continuous session of the board, and by a continuous session shall be meant a session during the course of which no adjournment for a longer period than forty-eight hours shall take place.

Section 2. Each of the boards enumerated or described in the first section of this act shall be and the same is hereby authorized to employ a clerk, whose compensation and mileage shall be the same as that of a member of the board. So much of section four of the act of June second, one thousand eight hundred and ninety-one, as authorizes the boards of examiners of candidates for inspectors of anthracite coal mines to engage the services of a clerk is hereby repealed, and all clerks hereafter appointed by the several boards hereinbefore mentioned shall be appointed under the provisions of this act.

Section 3. The members of the said boards shall, on the final adjournment of each session of their respective boards, submit to the Auditor General sworn statements approved by the president or chairman of their respective boards, setting forth the number of days during which each member shall have been actually in attendance on the sessions of the board of which he is a member during said session, as well as the distance from the home of the member to the place of meeting of his board as aforesaid, by the nearest practicable railway route, and the number of miles actually traveled by him; and the clerks of said boards shall submit like statements, and the Auditor General shall, upon the receipt of such sworn statements draw his warrant upon the State Treasurer in favor of each of such members and clerks for such sums as shall appear to be properly due each.

Section 4. All acts and parts of acts or supplements thereto in conflict herewith are hereby repealed.

Approved—The 26th day of June, A. D. 1895.

DANIEL H. HASTINGS.

## AN ACT

To protect the lives and limbs of miners from the dangers resulting from incompetent miners working in the anthracite coal mines of this Commonwealth, and to provide for the examination of persons seeking employment as miners in the anthracite region, and to prevent the employment of incompetent persons as miners in anthracite coal mines, and providing penalties for a violation of the same.

Section 1. Be it enacted, &c., That hereafter no person whomsoever shall be employed or engaged in the anthracite coal region of this Commonwealth, as a miner in any anthracite coal mine, without having obtained a certificate of competency and qualification so to do from the "Miners' Examining Board" of the proper district, and having been duly registered as herein provided.

Section 2. That there shall be established in each of the eight inspection districts in the anthracite coal region, a board to be styled the "Miners' Examining Board" of the .....district, to consist of nine miners who shall be appointed in the same manner as the boards to examine mine inspectors are now appointed from among the most skillful miners actually engaged in said business in their respective districts, and who must have had five years' practical experience in the same. The said persons so appointed shall each serve for a term of two years from the date on which their appointment takes effect, and they shall be appointed upon or before the expiration of the term of the present members of the "Miners' Examining Board," and they shall be and constitute the "Miners' Examining Board" for their respective districts, and shall hold the office for the term for which they were appointed, or until their successors are duly appointed and qualified, and shall receive as compensation for their services three dollars per day for each day actually engaged in this service, and all legitimate and necessary expenses incurred in attending the meetings of said board under the provisions of this act, and no part of the salary of said board or expenses thereof shall be paid out of the State Treasury.

Each of said boards shall organize by electing one of their members president, and one member as secretary, and by dividing themselves in to three sub-committees for the more convenient discharge of their duties, each of said committees shall have all powers hereinafter conferred upon the board; and whenever in this act the words "Examining Board" are used, they shall be taken to include any of the committees thereof.

Every member of said board shall, within ten days of their appointment or being apprised of the same, take and subscribe an oath or affirmation before a properly qualified officer of the county in which they reside, that they will faithfully and impartially discharge the duties of their office.

Any vacancies occurring in said board shall be filled in the manner



hereinbefore provided from among such only as are eligible for original appointment.

Section 3. Each of said examining boards shall designate some convenient place within their districts for the meeting of the several committees thereof, and of which due notice shall be given by advertisement in two or more newspapers of the proper county, and so divided as to reach as nearly as practicable all the mining districts therein; but in no case shall such meeting be held in a building where any intoxicating liquors are sold.

Each of said committee shall open at the designated place of meeting a book of registration, in which shall be registered the name and address of each and every person duly qualified under this act to be employed as a miner in an anthracite coal mine. And it shall be the duty of all persons employed as miners to be properly registered, and in case of a removal from the district in which a miner is registered, it shall be his duty to be registered in the district to which he removes.

Application for registration only may be sent by mail to the board, after being properly attested before any person authorized to administer an oath or affirmation in the county in which the applicant resides. The form of application shall be subject to such regulation as may be prescribed by the boards, but in no case shall any applicant be put to any unnecessary expense in order to secure registration.

Section 4. Each applicant for examination and registration and for the certificate hereinafter provided, shall pay a fee of one dollar to the said board, and a fee of twenty-five cents shall be charged for registering any person who shall have been examined and registered by any other board, and the amount derived from this source shall be held by said boards and applied to the expenses and salaries herein provided and such as may arise under the provisions of this act; and the said boards shall report annually, to the court of common pleas of their respective counties and the Bureau of Mines and Mining all moneys received and disbursed under the provisions of this act, together with the number of miners examined and registered under this act and the number who failed to pass the required examination.

Section 5. That it shall be the duty of each of the said boards to meet once every month and not oftener, and said meeting shall be public, and if necessary, the meeting shall be continued to cover whatever portion may be required of a period of three days in succession, and examine under oath all persons who shall desire to be employed as miners in their respective districts; and said board shall grant such persons as may be qualified, certificates of competency or qualification which shall entitle the holder thereof to be employed



as and to do the work of miners as may be expressed in said certificate, and such certificates shall be good and sufficient evidence of registration and competency under this act; and the holder thereof shall be entitled to be registered without an examination in any other of the anthracite districts upon the payment of the fee herein provided.

All persons applying for a certificate of competency, or to entitle them to be employed as miners, must produce satisfactory evidence of having had not less than two years practical experience as a miner, or as a mine laborer in the mines of this Commonwealth, and in no case shall an applicant be deemed competent unless he appear in person before the said board and answer intelligently and correctly at least twelve questions in the English language pertaining to the requirements of a practical miner, and be perfectly identified under oath, as a mine laborer by at least one practical miner holding miners' certificates. The said board shall keep an accurate record of the proceedings of all its meetings, and in said record shall show a correct detailed account of the examination of each applicant, with the questions asked and their answer, and at each of its meetings the board shall keep said record open for public inspection. Any miner's certificate granted under the provisions of this act, and the hereinafter mentioned act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall not be transferable to any person or persons whatsoever, and any transfer of the same shall be deemed a violation of this act. Certificates shall be issued only at meetings of said board, and said certificates shall not be legal unless then and there signed in person by at least three members of said board.

Section 6. That no person shall hereafter engage as a miner in any anthracite coal mine without having obtained such certificate as aforesaid. And no person shall employ any person as a miner who does not hold such certificate as aforesaid, and no mine foreman or superintendent shall permit or suffer any person to be employed under him, or in the mines under his charge and supervision as a miner, who does not hold such certificates. Any person or persons who shall violate or fail to comply with the provisions of this act, shall be guilty of a misdemeanor, and on conviction thereof shall be sentenced to pay a fine not less than one hundred dollars and not to exceed five hundred dollars, or shall undergo imprisonment for a term not less than thirty days and not to exceed six months, or either, or both, at the discretion of the court.

Section 7. The persons who are now serving as members of the Miners' Examining Board as created by the act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-

nine, entitled "An act to provide for the examination of miners in the anthracite region of this Commonwealth, and to prevent the employment of incompetent persons as miners in anthracite coal mines," shall continue under the provisions of this act to serve as members of the "Miners' Examining Board" until the terms for which they were appointed under the provisions of the said act approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine, shall have expired, and in the performance of the duties of their office they shall be subject to the provisions and requirements of this act.

Section 8. Nothing in this act shall be construed to in any way, excepting as herein provided, effect miners' certificates which have been lawfully issued under the provisions of the herein mentioned act, approved the ninth day of May, Anno Domini one thousand eight hundred and eighty-nine.

Section 9. It shall be the duty of the several Miners' Examining Boards to investigate all complaints or charges of non compliance or violation of the provisions of this act, and to prosecute all persons so offending; and upon their failure so to do, then it shall become the duty of the district attorney of the county wherein the complaints or charges are made to investigate the same and prosecute all persons so offending, and it shall at all times be the duty of the district attorney to prosecute such members of the Miners' Examining Board as have failed to perform their duty under the provisions of this act; but nothing herein contained shall prevent any citizen, a resident of this Commonwealth, from prosecuting any person or persons violating this act, with power to employ private counsel to assist in the prosecution of the same; upon conviction of any member of the Miners' Examining Board for any violation of this act, in addition to the penalties herein provided, his office shall be declared vacant, and he shall be deemed ineligible to act as a member of the said board.

Section 10. For the purposes of this act the members of the said "Miners' Board" shall have power to administer oaths.

Section 11. All acts or parts of acts inconsistent herewith are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL H. HASTINGS.

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## AN ACT

To amend the tenth section of article ten of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, providing that self-acting doors are used.

Section 1. Be it enacted, &c., That the tenth section of article ten

of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, which reads as follows:

"All main doors shall have an attendant whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through," be and the same is hereby amended to read as follows:

All main doors shall have an attendant, whose constant duty it shall be to open them for transportation and travel and prevent them from standing open longer than is necessary for persons or cars to pass through, unless a self-acting door is used which is approved by the inspector of the district.

Approved—The 20th day of April, A. D. 1899.

WILLIAM A. STONE.

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## AN ACT.

Relating to anthracite mines, and providing for the care and life and attention of employes injured in and about said mines.

Section 1. Be it enacted, &c., That within six (6) months after the passage of this act, it shall be unlawful to operate any anthracite mine, employing ten (10) men or more, in the State of Pennsylvania, unless said mine is provided with a sufficient quantity of linseed or olive oil bandages, linen, splints, woolen and waterproof blankets. Said articles shall be stored in a room, erected at a convenient place in the mine, which room shall not be less than eight by twelve feet, and sufficiently furnished, lighted, clean and ventilated so that therein medical treatment may be given injured employes in case of emergency. The furnishings shall be sufficient to accommodate two or more persons, in a reclining and sitting posture.

Section 2. It shall be the duty of the mine foreman or his assistants, in case of injury to any employe by explosion of gas or powder, or by any cause while said miners are at work in said mines, to at once visit the scene of accident, see that the injured is carefully wrapped in woolen blankets and removed to the "medical room," and so treated with oils or other remedies as will add to the comfort and care of the patient. After being treated with all the skill known to the foreman or his assistants, the injured person shall be carefully wrapped up and sent to the surface, to be taken home in an ambulance or to



the mining hospital, as may be desired, without expense to the injured party.

Section 3. Where accident to any employe involves injury to limbs or causes loss of blood, the foreman or his assistants shall see that the bandages, splints and linen shall be applied where necessary to prevent loss of blood and relieve pain. The foreman shall, in all cases, see that the injured person is sent to the surface without delay. He shall also keep a book showing required articles on hand, name of persons injured, nature of injury, treatment, and by whom treated at time of accident.

Section 4. It shall be the duty of the mine inspector to visit each of the medical rooms in his district at least once in six months; see that the law is complied with; examine records of the medical room. He shall notify the county coroner of any neglect or non-compliance with the provisions of this act by any operator, which information shall be regarded as evidence on any inquest that may be held on employes, dying from injuries received while working in such anthracite mine.

Section 5. The neglect or refusal to perform the duties required to be performed by any section of this act; by the parties therein required to perform them, or the violation of any of the requirements hereof, shall be deemed a misdemeanor, and shall, upon conviction thereof in the court of quarter sessions of the county wherein the misdemeanor was committed, be punishable by a fine not exceeding five hundred dollars, or imprisoned in the county jail for a period not exceeding six months, or both, at the discretion of the court.

Section 6. That for any injury to employes, occasioned by any violation of the act, or any failure to comply with its provisions, by any owners, operators or superintendent of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator, for any direct injuries he may have sustained thereby; and in case of loss of life, limb or bodily power, by reason of such neglect or failure aforesaid, a right of action shall accrue to the person, widow or lineal heirs, for the recovery of damages for the injury he or they shall have sustained.

Section 7. The term "coal mine," as herein used, includes the shafts, slopes, drifts or inclined planes, connected with the excavations penetrating coal stratum or strata, which excavations are ventilated by one general air current, or division thereof, and connected by one general system of mine railroads, over which coal may be delivered to one or more parts outside the mine. The term "mine foreman" means the person who shall have, on behalf of the operators, immediate supervision of a coal mine. The term "operator" means any firm, corporation or individual operating any coal mine.



The term "anthracite mine" shall include any coal mine not now included in the bituminous boundaries.

Section 8. That all acts or parts of acts inconsistent herewith be, and the same are hereby repealed, and all local laws inconsistent herewith are hereby repealed.

Approved—The 29th day of May, A. D. 1901.

WILLIAM A. STONE.

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## AN ACT

Amending article two of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one.

Section 1. Be it enacted, &c., That article two of an act, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, and which reads as follows, to-wit:

### ARTICLE II.

#### Inspectors and Inspection Districts.

"Section 1. The counties of Susquehanna, Wayne, Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland, Columbia, Lebanon and Dauphin; or so much of them as may be included under the provisions of this act, shall be divided into eight (8) inspection districts, as follows:

"Section 2. First, All that portion of the Lackawanna coal field lying northeast of East and West Market streets in the city of Scranton, and of Slocum and Drinker streets in the borough of Dunmore, including the coal fields of Susquehanna and Wayne counties.

"Second. That portion of the Lackawanna coal field in Lackawanna county lying southwest of East and West Market streets in the city of Scranton, and west of Slocum and Drinker streets in the borough of Dunmore.

"Third. That portion of the Wyoming coal field situated in Luzerne county, east of and including Plains and Kingston townships.

"Fourth. The remaining portion of the Wyoming coal field west of Plains and Kingston townships, including the city of Wilkes-Barre and the boroughs of Kingston and Edwardsville.

"Fifth. That part of Luzerne county lying south of the Wyoming coal field together with Carbon county.

"Sixth. That part of the Schuylkill coal field in Schuylkill county

lying north of the Broad Mountain and east of a meridian line through the center of the borough of Girardville.

"Seventh. That part of the Schuylkill coal field in Schuylkill county lying north of the Broad Mountain and west of a meridian line through the center of the borough of Girardville, together with Columbia, Northumberland and Dauphin counties.

"Eighth. All that part of the Schuylkill coal field in Schuylkill county lying south of the Mahanoy Valley, and the county of Lebanon.

"Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of expiration of term, resignation, removal for cause, or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the counties of Susquehanna, Wayne and Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Sullivan, Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland, Lebanon, Columbia and Dauphin.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk, shall each receive the sum of five dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return by the nearest practicable railway route.

"Section 5. Whenever candidates for the office of Inspector are to be examined, the said examiner shall give public notice of the fact in not more than five papers published in the inspection district, and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and four of them shall agree in their recommendation of all candidates to the Governor who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answered thereto shall be sent to the Secretary of the Commonwealth, and published in at least two local papers, daily or weekly, and shall recommend only such applicants as they find qualified for the office.

"Should the Board of Examiners not be able to agree in their

selection and recommendation of a candidate, the judges of the court of common pleas shall dissolve the said board, and appoint a new board of like qualifications and powers.

“Upon the recommendation of the Board of Examiners as aforesaid, the Governor shall appoint such person or persons to fill the office of inspector of mines under this act, and shall issue to him a commission for the term of five years, subject, however, to removal for neglect of duty or malfeasance in office, as hereinafter provided for.

“Section 6. The person so appointed must be a citizen of Pennsylvania and shall have attained the age of thirty years. He must have a knowledge of the different systems of working coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five (5) years practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

“Before entering upon the duties of his office he shall take an oath or affirmation before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall also provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

“Section 7. The salary of each of the said inspectors shall be three thousand dollars per annum, which salary, together with the expenses incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

“Section 8. In case the inspector becomes incapacitated to perform the duties of his office for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas to depute some competent person recommended by the board of examiners to fill the office of inspector, until the said inspector shall be able to fulfil the duties of his office, and the person so appointed shall be paid in the same manner as is provided for the inspector of mines.

“Section 9. Each of the said inspectors shall reside in the district for which he is appointed, and shall give his whole time and attention to the duties of the office. He shall examine all the collieries in his district as often as his duties will permit or as often as the exigencies of the case or the condition of the mines require it; see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; attend every inquest held by the coroner, or his deputy, upon the bodies of persons killed in or about the collieries in his district; visit the scene of the accident for the purpose of making an examination into the



particulars of the same whenever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries of his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein, and the ventilation thereof, and the result of his labors generally shall be fully set forth.

"Section 10. The Board of Examiners, each for its respective district as hereinbefore provided for, in order to divide more equitably among the several mine inspectors the labor to be performed of the duties of the office, may, at any time, when they shall deem it desirable or necessary, readjust the several districts by the creation of new boundary lines, thereby adding to or taking from, as the case may be, the districts as at present bounded and described, if the court having jurisdiction approve the same.

"And in case it shall be deemed desirable or necessary to readjust any contiguous district, comprised by more than one judicial district, by the creation of new boundary lines, then in such case the examining boards of the territory affected or requiring such adjustment shall, in joint session, make such change or readjustment as they shall jointly agree upon, if the nearest court having jurisdiction to the territory affected to whom the said joint examining boards shall submit the matter, shall approve the same.

"Section 11. The mine inspector shall have the right and it is hereby made his duty, to enter, inspect and examine any mine or colliery in his district and the workings and machinery belonging thereto, at all reasonable times, either by day or night, but not so as to impede or obstruct the working of the colliery, and shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the district for which he is appointed, for the purpose of consultation or examination.

"He shall also have the right, and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights and into all matters and things connected with or relating to, as well as to make suggestions providing for the health and safety of persons employed in or about the same and especially to make inquiry whether the provision of this act have been complied with.

"The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

"The inspector shall make record of the visits, noting the time and material circumstances of the inspection.



"Section 12. No person who shall act or practice as a land agent or as a manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery in his district, shall, at the same time, hold the office of Inspector of Mines under this act.

"Section 13. Whenever a petition signed by fifteen or more reputable coal operators or miners, or both, setting forth any inspector of mines neglects his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas of the Commonwealth to the said inspector to appear at not less than five days notice, on a day fixed, before said court and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court find that the said inspector is neglectful of his duties or that his is incompetent to perform the duties of the office for any cause that existed previous to his appointment or that has arisen since his appointment or that he is guilty of malfeasance in office, the court shall certify the same to the Governor of the Commonwealth, who shall declare the office of inspector for the district vacant and proceed, in compliance with the provisions of this act, to appoint a properly qualified person to fill the office.

"The cost of said investigation shall be borne by the removed inspector; but if the allegations in the petition are not sustained the costs shall be paid by the petitioners.

"Section 14. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the inspector, properly arranged and preserved, in a convenient place in the district for which each inspector has been appointed, and shall be transferred by him, with any other property of the Commonwealth that may be in his possession, to his successor in office.

"Section 15. The persons who, at the time this act goes into effect, are acting as inspectors of mines under the acts hereby repealed shall continue to act in the same manner as if they had been appointed under this act, until the term for which they were appointed has expired," be amended so as to read as follows:

## ARTICLE II.

### Inspectors and Inspection Districts.

Section 1. The counties of Luzerne, Lackawanna, Carbon, Schuylkill, Northumberland and Columbia, shall be divided into six inspection districts, as follows:

Section 2. First district—The county of Luzerne.

Second district—The county of Lackawanna.

Third district—The county of Carbon.

Fourth district—The county of Schuylkill.

Fifth district—The county of Northumberland.

Sixth district—The county of Columbia.

Section 3. In order to fill any vacancy that may occur in the office of Inspector of Mines by reason of the expiration of term, resignation, removal for cause or from any other reason whatever, the judges of the court of Lackawanna county shall appoint an examining board for the county of Lackawanna, and the judges of the court of Luzerne county shall appoint an examining board for the counties of Carbon and Luzerne, and the judges of Schuylkill county shall appoint an examining board for the counties of Schuylkill, Northumberland and Columbia.

Section 4. The said Board of Examiners shall be composed of three reputable coal miners in actual practice and two reputable mining engineers, all of whom shall be appointed at the first term of court in each year, to hold their places during the year. Any vacancies that may occur in the Board of Examiners shall be filled by the court as they occur. The said Board of Examiners shall be permitted to engage the services of a clerk, and they, together with the clerk shall each receive the sum of five (5) dollars per day for every day they are actually engaged in the discharge of their duties under this appointment, and mileage at the rate of six cents per mile from their home to the place of meeting and return, by the nearest practicable railway route.

Section 5. Whenever candidates for the office of Inspector are to be examined, the said examiner shall give public notice of the fact in not more than five newspapers published in the inspection district, and at least two weeks before the meeting, specifying the time and place where such meeting shall be held. The said examiners shall be sworn to a faithful discharge of their duties, and at least four of them shall sign a certificate, setting forth the fact of the applicants having passed a successful examination, and who have answered ninety per centum of the questions; the names of the applicants, the questions asked and answered thereto, shall be sent to the Secretary of the Commonwealth, and published in at least two papers, daily or weekly, and shall give such certificate to only such applicant as has passed the required examination.

Section 6. The said Board of Examiners shall hold at least one such examination during each year, at least six months before the date of the general election, in the month of November of each year.

Section 7. At the next general election in November, the qualified voters of the first inspection district shall elect five qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the second inspection district shall elect four qualified persons to

act as Mine Inspectors of this Commonwealth; the qualified voters of the third inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth; the qualified voters of the fourth inspection district shall elect four qualified persons to act as Mine Inspectors of this Commonwealth; the qualified voters of the Fifth Inspection district shall elect one qualified person to act as Mine Inspector of this Commonwealth: Provided, That the present Mine Inspectors in the several inspection districts shall continue in office until the expiration of the terms for which they have been appointed, and the number of inspectors to be elected at the coming election shall be reduced by the number of Inspectors now regularly appointed and serving in said districts. When the terms of the present Inspectors shall expire, their successors shall be elected in accordance with the provisions of this act. At the said first election under this act in November, Anno Domini one thousand nine hundred and two, for said Inspectors, the qualified electors of the First Inspection District shall elect two Inspectors; the qualified electors of the Second Inspection district shall elect two Inspectors; the qualified electors of the Fourth Inspection district shall elect two Inspectors; the qualified electors of the Fifth Inspection district shall elect one Inspector, and the qualified electors of the Sixth Inspection district shall elect one Inspector. At the expiration of the term of office of any of the present Inspectors, who hold office under the appointment of the Governor of the Commonwealth, the qualified electors of the Third Inspection district shall elect one Inspector, and as further vacancies are caused by the expiration of the term of office of the present Inspectors, the qualified electors of the several inspection districts shall elect Inspectors to take their places, beginning with the First Inspection district, then the Second Inspection district, Third Inspection district, Fourth Inspection district, Fifth Inspection district and Sixth Inspection district, until each inspection district has its full quota of elected inspectors under this act. Said Inspectors, elected under this act, shall be under the directions of the Chief of the Bureau of Mines, who shall assign districts to the several Inspectors in the respective counties in which they are elected.

Section 8. Candidates for the office of Mine Inspector shall file with the county commissioners a certificate from the mine examining board, as above set forth, before their names shall be allowed to go upon the ballot as provided by the county commissioners for the general election; and the name of no person shall be placed upon the official ballot except such as has filed the certificate as herein required; and no person shall be qualified to act as such Mine Inspector unless such certificate has been previously filed with the county commissioners of his county.

Section 9. The person so elected must be a citizen of Pennsylvania



and shall have attained the age of thirty years. He must have a knowledge of the different systems of work in coal mines, and he must produce satisfactory evidence to the Board of Examiners of having had at least five years practical experience in anthracite coal mines of Pennsylvania. He must have had experience in coal mines where noxious and explosive gases are evolved.

Before entering upon the duties of his office he shall take an oath or affirmation, before an officer properly qualified to administer the same, that he will perform his duties with fidelity and impartiality; which oath or affirmation shall be filed in the office of the prothonotary of the county. He shall provide himself with the most modern instruments and appliances for carrying out the intentions of this act.

Section 10. The salary of each of the said Inspectors shall be three thousand dollars per annum, which salary, together with the expenses incurred in carrying into effect the provisions of this act, shall be paid by the State Treasurer out of the Treasury of the Commonwealth upon the warrant of the Auditor General.

Section 11. Each of the said Inspectors shall hold said office for a term of three years from the first Monday of January immediately succeeding his election to said office, and until his successor is duly elected and qualified.

Section 12. It shall be the duty of the Chief of Bureau of Mines and Mining to direct one or more of the Inspectors who shall be elected under this act, and it shall be the duty of said Inspectors to obey said orders of the said Chief of Bureau of Mines and Mining, to inspect such collieries as come under the act to which this act is an amendment in counties not mentioned in this amendment to said act, in such manner and at such times as is required by law, and the inspectors inspecting said collieries shall make and include in his return a due report of said inspection.

Section 13. In case of death, resignation, removal from office, or other vacancies in the office of Mine Inspector before the expiration of said term of office, the judges of the court of common pleas of the county in which said vacancy occurs shall appoint a duly qualified person to fill said vacancy for the unexpired term. Said appointee to be one of the persons having filed with the county commissioners of said county a certificate from the Board of Examiners, showing he passed a successful examination before the said Board, and is duly qualified as hereinbefore mentioned.

Section 14. In case the Inspector becomes incapacitated to perform the duties of his office for a longer period than two weeks, it shall be the duty of the judges of the court of common pleas of the county from which said Inspector was elected to deputize some competent person, recommended by the Board of Examiners, to fill the



office of Inspector until the said Inspector shall be able to fulfil the duties of his office, and the person so appointed shall be paid in the same manner as is provided for the Inspector of Mines.

Section 15. Each of the said Inspectors shall reside in the district for which he is elected, and shall give his whole time and attention to the duties of his office. He shall examine all the collieries in his district at least once every two months, as often in addition thereto as the necessities of the case or the condition of the mines require. He shall see that every necessary precaution is taken to secure the safety of the workmen and that the provisions of this act are observed and obeyed; and he shall personally visit each working face, and see that the air-current is carried to the working faces and is of sufficient quantity or volume to thoroughly ventilate the places. He shall every three months make a report of the condition of each working face in each colliery, on a form to be furnished to the inspectors by the Chief of the Bureau of Mines and Mining, designating the gangway in which the working is situated, and the breast number of said working and their condition shall be designated by the words good, fair, or bad, as the circumstances may warrant; and the said report, or a duplicate, shall be placed in a weather and dust-proof case, with a glass front; said case to be furnished by the operator, and placed in a conspicuous place at each mine opening, shaft, slope or drift, so that the workmen have easy access thereto. He shall certify in said report that the employes are hoisted to the surface of the ground or given access thereto according to law; he shall attend every inquest held by the coroner or his deputy upon the bodies of persons killed in or about the collieries in his district; he shall visit the scene of the accident, for the purpose of making an examination into the particulars of the same, wherever loss of life or serious personal injury occurs, as elsewhere herein provided for, and make an annual report of his proceedings to the Secretary of Internal Affairs of the Commonwealth at the close of every year, enumerating all the accidents in and about the collieries in his district, marking in tabular form those accidents causing death or serious personal injury, the condition of the workings of the said mines with regard to the safety of the workmen therein and the ventilation thereof, and the results generally shall be fully set forth; and such other duties as now are or hereafter may be required by law.

Section 16. The nomination and election of said mine inspectors shall be under the general election laws of this Commonwealth.

Section 17. The Mine Inspector shall have the right, and it is hereby made his duty, to enter, inspect and examine any mine or colliery in the territory allotted to him and the workings and machinery belonging thereto, at all reasonable times, either by day or by night, but not so as to obstruct or impede the working of the colliery, and

shall have power to take one or more of his fellow inspectors into or around any mine or colliery in the territory allotted to him, for the purpose of consultation or examination.

He shall also have the right, and it is hereby made his duty, to make inquiry into the condition of such mine or colliery workings, machinery, ventilation, drainage, method of lighting or using lights, and into all matters and things connected with or relating to, as well as to make suggestions providing for, the health and safety of persons employed in or about the same, and especially to make inquiry whether the provisions of this act have been complied with.

The owner, operator or superintendent of such mine or colliery is hereby required to furnish the means necessary for such entry, inspection, examination, inquiry and exit.

The inspector shall make a record of the visit, noting the time and material circumstances of the inspection.

Section 18. No person who shall act or practice as a land agent or as a manager or agent of any coal mine or colliery, who is pecuniarily interested in operating any coal mine or colliery, shall at the same time hold the office of Inspector of Mines under this act.

Section 19. Whenever a petition signed by fifty or more reputable coal miners, or by fifteen or more reputable coal operators, or more, or both, setting forth that any inspector of mines neglect his duties, or is incompetent, or is guilty of malfeasance in office, it shall be the duty of the court of common pleas from which said Inspector was elected to issue a citation, in the name of the Commonwealth, to the said Inspector to appear at not less than five days' notice, on a day fixed, before said court, and the court shall then proceed to inquire into and investigate the allegations of the petitioners. If the court finds that the said Inspector is neglectful of his duties, or is incompetent to perform the duties of his office for any cause that existed previous to his election, or that has arisen since his election, or that he is guilty of malfeasance in office, the court shall declare the said Inspector removed from office and proceed to fill the vacancy. The cost of said investigation shall be borne by the removed Inspector; but if the allegations in the petition are not sustained, the cost shall be paid by the Treasurer of this Commonwealth upon warrant of the Auditor General, or by the petitioners in case the court finds that there was no probable ground for said charge.

Section 20. The maps and plans of the mines and the records thereof, together with all the papers relating thereto, shall be kept by the Inspector, properly arranged and preserved, in a convenient place in the territory to which the inspector has been allotted, and shall be transferred by him, with any other property of the Commonwealth that may be in his possession, to his successor in office.

Section 21. This act shall go into effect from the first day of January, Anno Domini one thousand nine hundred and two.

Section 22. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

Approved—The 8th day of June, A. D. 1901.

WILLIAM A. STONE.

# Bituminous Mining Laws.

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## LAWS RELATING TO COAL MINING.

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### AN ACT

To protect miners in the bituminous coal region of the Commonwealth.

Section 1. Be it enacted, &c., That after the period of three months from the passage of this act, any miner employed by an individual, firm or corporation for the purpose of mining coal shall be entitled to receive from his employer, and failing to receive then to collect, by due process of law, at such rates as may have been agreed upon between the employer and the employed, full and exact wages accruing to him for the mining of all sizes of merchantable coal so mined by him, whether the same shall exist in the form of nut or lump coal; and in the adjudication of such wages seventy-six pounds shall be deemed one bushel, and two thousand pounds net, shall be deemed one ton of coal: Provided, That nothing contained in this act shall be construed to prevent operators and miners contracting for any method of measuring and screening the coal mined by such miners, as they may contract for.

Section 2. That at every bituminous coal mine in this Commonwealth, where coal is mined by measurement, all cars, filled by miners or their laborers, shall be uniform in capacity at each mine; no unbranded car or cars shall enter the mine for a longer period than three months, without being branded by the mine inspector of the district, wherein the mine is situated; and any owner or owners, or their agents, violating the provisions of this section, shall be subject to a fine of not less than one dollar per car for each and every day as long as the car is not in conformity with this act, and the mine inspector of the district, where the mine is located, on receiving notice from the check-master or any five miners working in the mine, that a car or cars are not properly branded, or not uniform in capacity according to law, are used in the mine where he or they are employed, then inside of three days from the date of receiving said notice, it shall be his duty to enforce the provisions of this section, under penalty of ten dollars for each and every day he permits such car or cars to enter the mine: Provided, That nothing contained in this section shall be construed or applied to those mines which do not use more than ten cars.



Section 3. That at every bituminous coal mine in this Commonwealth, where coal is mined by weight or measure, the miners or a majority of those present at a meeting called for that purpose, shall have the right to employ a competent person as check-weighman, or check-measurer as the case may require, who shall be permitted at all times to be present at the weighing or measurement of coal, also have power to weigh or measure the same, and during the regular working hours to have the privilege to balance and examine the scales, or measure the cars: Provided, That all such balancing or examination of scales shall only be done in such way, and in such time, as in no way to interfere with the regular working of the mines. And he shall not be considered a trespasser during working hours while attending to the interests of his employers. And in no manner shall he be interfered with or intimidated by any person, agent, owner or miner. And any person violating these provisions shall be held and deemed guilty of a misdemeanor, and upon conviction thereof, he shall be punished by a fine of not less than twenty dollars, and not exceeding one hundred dollars, or imprisonment at the discretion of the court. It shall be a further duty of check-weighman or check-measurer to credit each miner with all merchantable coal mined by him, on a proper sheet or book to be kept by him for that purpose. When differences arise between the check-weighman or check-measurer and the agent or owners of the mine, as to the uniformity, capacity or correctness of scales or cars used, the same shall be referred to the mine inspector of the district where the mine is located, whose duty it shall be to regulate the same at once, and in the event of said scales or cars proving to be correct, then the party or parties applying for the testing thereof to bear all costs and expenses thereof; but if not correct then the owner or owners of said mine to pay the cost and charges of making said examination: Provided further, That should any weighman or weighmen, agent or check-measurer, whether employed by operators or miners, knowingly or willfully adopt or take more or less pounds for a bushel or ton than is provided for in the first section of this act, or willfully neglect the balancing or examining of the scales or cars, or knowingly and willfully weigh coal with an incorrect scale, he shall be guilty of a misdemeanor, and upon conviction thereof, shall be imprisoned in the county jail for three months.

Section 4. All acts or parts of acts inconsistent with this act are hereby repealed.

Approved—The 1st day of June, A. D. 1883.

ROBT. E. PATTISON.

## AN ACT

Relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein.

## ARTICLE I.

## Survey—Maps and Plans.

Section 1. Be it enacted, &c., That the operator or superintendent of every bituminous coal mine shall make, or cause to be made by a competent mining engineer or surveyor, an accurate map or plan of such coal mine, not smaller than on a scale of two hundred feet to an inch, which map shall show as follows:

First. All measurements of said mine in feet or decimal parts thereof.

Second. All the openings, excavations, shafts, tunnels, slopes, planes, main-entries, cross-entries, rooms, et cetera, in proper numerical order in each opened strata of coal in said mine.

Third. By darts or arrows made thereon by a pen or pencil the direction of air currents in said mine.

Fourth. An accurate delineation of the boundary lines between said coal mine and all adjoining mines or coal lands, whether owned or operated by the same operator or other operator, and the relation and proximity of the workings of said mine to every other adjoining mine or coal lands.

Fifth. The elevation above mean tide at Sandy Hook of all tunnels, and entries, and of the face of working places adjacent to boundary lines at points not exceeding three hundred feet apart.

Sixth. The bearings and lengths of each tunnel or entry, and of the boundary or property lines. The said map or plan, or a true copy thereof, shall be kept in the general mine office by the said operator or superintendent for use of the mine inspectors and for the inspection of any person or persons working in said mine whenever said person or persons shall have cause to fear that any working place is becoming dangerous by reason of its proximity to other workings that may contain water or dangerous gas.

Section 2. At least once in every six months, or oftener if necessary, the operator or superintendent of each mine shall cause to be shown accurately on the map or plan said coal mine, all the excavations made therein during the time elapsing since such excavations were last shown upon said map or plan; and all parts of said mine which were worked out or abandoned during said elapsed period of time shall be clearly indicated by colorings on said map or plan, and whenever any of the workings or excavations of said coal mine have been driven to their destination, a correct measurement of all such workings or excavations shall be made promptly and recorded in a survey book prior to the removal of the pillars or any part of the same from such workings or excavations.

Section 3. The operator or superintendent of every coal mine shall, within six months after the passage of this act, furnish the mine inspector of the district in which said mine is located with a correct copy on tracing muslin or sun print, of the map or plan of said mine hereinbefore provided for. And the inspector of the district shall, at the end of each year or twice a year if he requires it, forward said map or plan to the proper person at any particular mine, whose duty it shall be to place or cause to be placed on said map or plan all extensions and worked out or abandoned parts of the mine during the preceding six or twelve months, as the case may be, and return the same to the mine inspector within thirty days from the time of receiving it. The copies of the maps or plans of the several coal mines of each district as hereinbefore required to be furnished to the mine inspector shall remain in the care of the inspector of the district in which the said mines are situated, as official records, to be transferred by him to his successor in office; but it is provided that in no case shall any copy of the same be made without the consent of the operator or his agent.

Section 4. If any superintendent or operator of mines shall neglect or fail to furnish to the mine inspector any copies of maps or plans as hereinbefore required by this act, or if the mine inspector shall believe that any map or plan of any coal mine made or furnished in pursuance of the provisions of this act is materially inaccurate or imperfect, then, in either case, the mine inspector is hereby authorized to cause a correct survey and map or plan of said coal mine to be made at the expense of the operator thereof, the cost of which shall be recoverable from said operator as other debts are recoverable by law: Provided, however, That if the map or plan which may be claimed by the mine inspector to be inaccurate shall prove to be correct, then the Commonwealth shall be liable for the expense incurred by the mine inspector in causing to be made said test survey and map, and the cost thereof, ascertained by the Auditor General by proper vouchers and satisfactory proof, shall be paid by the State Treasurer upon warrants which the said Auditor General is hereby directed to draw for the same.

## ARTICLE II.

Section 1. It shall not be lawful for the operator, superintendent or mine foreman of any bituminous coal mine to employ more than twenty persons within said coal mine, or permit more than twenty persons to be employed therein at any one time unless they are in communication with at least two available openings to the surface from each seam or stratum of coal worked in such mine, exclusive of the furnace upcast shaft or slope: But provided, That in any mine operated by shaft or slope and ventilated by a fan, if the air shaft



shall be divided into two compartments, one of them may be used for an air-way and the other for the purpose of egress and ingress from and into said mine by the persons therein employed and the same shall be considered a compliance with the provisions of this section hereinbefore set forth. And there shall be cut out or around the side of every hoisting shaft, or driven through the solid strata at the bottom thereof, a traveling way not less than five feet high and three feet wide to enable persons to pass the shaft in going from one side of it to the other without passing over or under the cage or other hoisting apparatus.

Section 2. The shaft or outlet, other than the main shaft or outlet shall be separated from the main outlet and from the furnace shaft by natural strata at all points by a distance of not less than one hundred and fifty feet (except in all mines opened prior to June thirtieth, one thousand eight hundred and eighty-five, where such distances may be less, if in the judgment of the mine inspector one hundred and fifty feet is impracticable). If the mine be worked by drift, two openings exclusive of the furnace upcast shaft and not less than thirty feet apart, shall be required (except in drift mines opened prior to June thirtieth, one thousand eight hundred and eighty-five, where the mine inspector of the district shall deem the same impracticable). Where the two openings shall not have been provided as required hereinbefore by this act, the mine inspector shall cause the second to be made without delay; and in no case shall furnace ventilation be used where there is only one opening into the mine.

Section 3. Unless the mine inspector shall deem it impracticable, all mines shall have at least two entries or other passage ways, one of which shall lead from the main entrance and the other from the opening into the body of the mine, and said two passageways shall be kept well drained and in a safe condition for persons to travel therein, throughout their whole length so as to obtain, in cases of emergency, a second way for egress from the workings. No part of said workings shall at any time be driven more than three hundred feet in advance of the aforesaid passageways, except entries, air-ways or other narrow work, but should an opening to the surface be provided from the interior of the mine, the passageways aforesaid may be made and maintained therefrom into the working part of the mine, and this shall be deemed sufficient compliance with the provisions of this act relative thereto; said two passageways shall be separated by pillars of coal or other strata of sufficient strength and width.

Section 4. Where necessary to secure access to the two passage ways required in section three of article two of this act in any slope mine where the coal seam inclines and has workings on both sides of said slope, there shall be provided an overcast for the use of per-



sons working therein, the dimensions of which shall not be less than four feet wide and five feet high. Said overcast shall connect the workings on both sides of said slope and the intervening strata between the slope and the overcast shall be of sufficient strength and thickness at all points for its purpose: Provided, That if said overcast be substantially constructed of masonry or other incombustible material it shall be deemed sufficient.

Section 5. When the opening or outlet, other than the main opening, is made and does not exceed seventy-five feet in vertical depth, it shall be set apart exclusively for the purpose of ingress to or egress from the mine by any person or persons employed therein it shall be kept in a safe and available condition and free from steam and dangerous gases, and all other obstructions, and if such opening is a shaft it shall be fitted with safe and convenient stairs with steps of an average tread of ten inches and nine inches rise, not less than two feet wide and to not exceed an angle of sixty degrees descent with landings of not less than eighteen inches wide and four feet long, at easy and convenient distances: Provided, That the requirements of this section shall not be applicable to stairways in use prior to June thirtieth, one thousand eight hundred and eighty-five, when in the judgment of the mine inspector, they are sufficiently safe and convenient. And water coming from the surface or out of the strata in the shaft shall be conducted away by rings, casing or otherwise and be prevented from falling upon persons who are ascending or descending the stairway of the shaft.

Section 6. Where any mine is operated by a shaft which exceeds seventy-five feet in vertical depth, the persons employed in said mine shall be lowered into and raised from said mine by means of machinery, and in any such mine the shaft, other than the main shaft, shall be supplied with safe and suitable machinery for hoisting and lowering persons, or with safe and convenient stairs for use in cases of emergency by persons employed in said mine: Provided, That any mine operated by two shafts, and where safe and suitable machinery is provided at both shafts for hoisting coal or persons, shall have sufficiently complied with the requirements of this section.

Section 7. At any mine, where one of the two openings required hereinbefore is a slope and is used as a traveling way, it shall not have a greater angle of descent than twenty degrees and may be of any depth.

Section 8. The machinery used for lowering or raising the employes into or out of the mine and the stairs used for ingress or egress, shall be kept in a safe condition, and inspected once each twenty-four hours by a competent person employed for that purpose. And such machinery and the method of its inspection shall be approved by the mine inspector of the district in which the mine is situated.

## ARTICLE III.

## Hoisting Machinery, Safety Catches, Signaling Apparatus, Et Cetera.

Section 1. The operator or superintendent shall provide and maintain, from the top to bottom of every shaft where persons are raised or lowered, a metal tube suitably adapted to the free passage of sound through which conversation may be held between persons at the top and bottom of said shaft, and also a means of signalling from the top to the bottom thereof, and shall provide every cage or gear carriage used for hoisting or lowering persons with a sufficient overhead covering to protect those persons when using the same, and shall provide also for each said cage or carriage a safety catch approved by the mine inspector. And the said operator or superintendent shall see that flanges, with a clearance of not less than four inches, when the whole of the rope is wound on the drum, are attached to the sides of the drum of every machine that is used for lowering and hoisting persons in and out of the mine, and also that adequate brakes are attached to the drum. At all shafts safety gates, to be approved by the mine inspector of the district shall be so placed as to prevent persons from falling into the shaft.

Section 2. The main coupling chain attached to the socket of the wire rope shall be made of the best quality of iron and shall be tested by weights or otherwise to the satisfaction of the mine inspector of the district where the mine is located, and bridle chains shall be attached to the main hoisting rope above the socket, from the top cross-piece of the carriage or cage, so that no single chain shall be used for lowering or hoisting persons into or out of the mines.

Section 3. No greater number of persons shall be lowered or hoisted at any one time than may be permitted by the mine inspector of the district, and notice of the number so allowed to be lowered or hoisted at any one time shall be kept posted up by the operator or superintendent in conspicuous places at the top and bottom of the shaft, and the aforesaid notice shall be signed by the mine inspector of the district.

Section 4. All machinery about mines from which any accident would be liable to occur shall be properly fenced off by suitable guard railing.

## ARTICLE IV.

Section 1. The operator or superintendent of every bituminous coal mine, whether shaft, slope or drift, shall provide and hereafter maintain ample means of ventilation for the circulation of air through the main-entries, cross-entries and all other working places to an extent that will dilute, carry off and render harmless the noxious or dangerous gases, generated in the mine, affording not less than one

hundred cubic feet per minute for each and every person employed therein; but in a mine where fire damp has been detected the minimum shall be one hundred and fifty cubic feet per minute for each person employed therein, and as much more in either case as one or more of the mine inspectors may deem requisite.

Section 2. After May thirtieth, one thousand eight hundred and ninety-four, not more than sixty-five persons shall be permitted to work in the same air current: Provided, That a larger number, not exceeding one hundred, may be allowed by the mine inspector where, in his judgment, it is impracticable to comply with the foregoing requirement; and mines where more than ten persons are employed, shall be provided with a fan, furnace or other artificial means to produce the ventilation, and all stoppings between main intake and return air-ways hereinafter built or replaced shall be substantially built with suitable material, which shall be approved by the inspector of the district.

Section 3. All ventilating fans shall be kept in operation continuously night and day, unless operations are indefinitely suspended, except written permission is given by the mine inspector of the district to stop the same, and the said written permission shall state the particular hours the said fan may not be in operation, and the mine inspector shall have power to withdraw or modify such permission as he may deem best, but in all cases the fan shall be started two hours before the time to begin work. When the fan may be stopped by permission of the mine inspector a notice printed in the various languages used by persons employed in the mine, stating at what hour or hours the fan will be stopped, shall be posted by the mine foreman in a conspicuous place at the entrance or entrances to the mine.

Said printed notices shall be furnished by the mine inspector and the cost thereof borne by the State: Provided, That should it at any time become necessary to stop the fan on account of accident or needed repairs to any part of the machinery connected therewith, or by reason of any other unavoidable cause, it shall then be the duty of the mine foreman or any other officials in charge, after first having provided, as far as possible for the safety of the persons employed in the mine, to order said fan to be stopped so as to make the necessary repairs or to remove any other difficulty that may have been the cause of its stoppage. And all ventilating furnaces in mines shall, for two hours before the appointed time to begin work and during working hours, be properly attended by a person employed for that purpose. In mines generating fire-damp in sufficient quantities to be detected by ordinary safety lamps, all main air bridges or overcasts made after the passage of this act shall be built of masonry or other incombustible material of ample strength or be driven through the solid strata.



In all mines the doors used in guiding and directing the ventilation of the mine shall be so hung and adjusted that they will close themselves, or be supplied with spring or pulleys so that they cannot be left standing open, and an attendant shall be employed at all principal doors through which cars are hauled, for the purpose of opening and closing said doors when trips of cars are passing to and from the workings, unless an improved self-acting door is used, which principal doors shall be determined by the mine inspector or mine foreman. A hole for shelter shall be provided at each door so as to protect said attendant from being run over by the cars while attending to his duties, and persons employed for this purpose shall at all times remain at their post of duty during working hours: Provided, That the same person may attend two doors where the distance between them is not more than one hundred feet. On every inclined plane or road in any mine where haulage is done by machinery and where a door is used, an extra door shall be provided to be used in case of necessity.

#### ARTICLE V.

##### Safety Lamps, Fire Bosses, Et Cetera.

Section 1. All mines generating fire-damp shall be kept free of standing gas in all working places and roadways. No accumulation of explosive gas shall be allowed to exist in the worked out or abandoned parts of any mine when it is practicable to remove it, and the entrance or entrances to said worked out and abandoned places shall be properly fenced off, and cautionary notices shall be posted upon said fencing to warn persons of danger.

Section 2. In all mines wherein explosive gas has been generated within the period of six months next preceding the passage of this act, and also in all mines where fire-damp shall be generated, after the passage of this act, in sufficient quantities to be detected by the ordinary safety lamp, every working place without exception and all road ways shall be carefully examined immediately before each shift by competent person or persons appointed by the superintendent and mine foreman for that purpose. The person or persons making such examination shall have received a fire boss certificate of competency required by this act, and shall use no light other than that enclosed in a safety lamp while making said examination. In all cases said examination shall be begun within three hours prior to the appointed time of each shift commencing to work, and it shall be the duty of the said fire boss at each examination to leave at the face and side of every place so examined, evidence of his presence. And he shall also, at each examination, inspect the entrance or entrances to the worked out or abandoned parts which are adjacent



to the roadways and working places of the mine where fire-damp is likely to accumulate, and where danger is found to exist he shall place a danger signal at the entrances to such places, which shall be sufficient warning for persons not to enter said place.

Section 3. In any place that is being driven towards or in dangerous proximity to an abandoned mine or part of a mine suspected of containing inflammable gases, or which may be inundated with water, bore holes shall be kept not less than twelve feet in advance of the face, and on the sides of such working places, said side holes to be drilled diagonally not more than eight feet apart, and any place driven to tap water or gas shall not be more than ten feet wide, and no water or gas from an abandoned mine or part of a mine and no bore holes from the surface, shall be tapped until the employes, except those engaged at such work, are out of the mine, and such work to be done under the immediate instruction of the mine foreman.

Section 4. The fire boss shall at each entrance to the mine or in the main intake air-way near to the mine entrance, prepare a permanent station with the proper danger signal designated by suitable letters and colors placed thereon, and it shall not be lawful for any person or persons, except the mine officials in cases of necessity, and such other persons as may be designated by them, to pass beyond said danger station until the mine has been examined by the fire boss as aforesaid and the same, or certain parts thereof, reported by him to be safe, and in all mines where operations are temporarily suspended the superintendent and mine foreman shall see that a danger signal be placed at the mine entrance or entrances, which shall be a sufficient warning to persons not to enter the mine, and if the ordinary circulation of air through the mine be stopped each entrance to said mine shall be securely fenced off and a danger signal shall be displayed upon said fence and any workman or other person, (except those persons hereinbefore provided for,) passing by any danger signal into the mine before it has been examined and reported to be safe as aforesaid, shall be deemed guilty of a misdemeanor and it shall be the duty of the fire boss, mine foreman, superintendent or any employe to forthwith notify the mine inspector, who shall enter proceedings against such person or persons as provided for in section two of article twenty-one of this act.

Section 5. All entries, tunnels, air ways, traveling ways and other working places of a mine where explosive gas is being generated in such quantities as can be detected by the ordinary safety lamp, and pillar workings and other working places in any mine where a sudden inflow of said explosive gas is likely to be encountered, (by reason of the subsidence of the overlying strata or from any other causes), shall be worked exclusively with locked safety lamps. The use of

open lights is also prohibited in all working places, roadways or other parts of the mine through which fire-damp might be carried in the air current in dangerous quantities. In all mines or parts of mines worked with locked safety lamps the use of electric wires and electric currents is positively prohibited, unless said wires and machinery and all other mechanical devices attached thereto and connected therewith are constructed and protected in such a manner as to secure freedom from the emission of sparks or flame therefrom into the atmosphere of the mine.

Section 6. After January first, one thousand eight hundred and ninety-four, the use of the common Davy safety lamp for general work on any bituminous coal mine is hereby prohibited, neither shall the Clanny lamp be so used unless its gauze is thoroughly protected by a metallic shield, but this act does not prohibit the use of the Davy and Clanny lamps by the mine officials for the purpose of examining the workings for gas.

Section 7. All safety lamps used for examining mines or for working therein shall be the property of the operator, and shall be in the care of the mine foreman, his assistant or fire boss, or other competent person, who shall clean, fill, trim, examine and deliver the same, locked, in a safe condition to the men when entering the mine before each shift, and shall receive the same from the men at the end of each shift, for which service a charge not exceeding cost of labor and material may be made by the operator. A sufficient number of safety lamps, but not less than twenty-five per centum of those in use, shall be kept at each mine where gas has at any time been generated in sufficient quantities to be detected by an ordinary safety lamp, for use in case of emergency. It shall be the duty of every person who knows his safety lamp to be injured or defective, to promptly report such fact to the party authorized herein to receive and care for said lamps, and it shall be the duty of that party to promptly report such fact to the mine foreman.

## ARTICLE VI.

### Mine Foreman and His Duties.

Section 1. In order to better secure the proper ventilation of the bituminous coal mines and promote the health and safety of the persons employed therein, the operator or superintendent shall employ a competent and practical inside overseer for each and every mine, to be called mine foreman; said mine foreman shall have passed an examination and obtained a certificate of competency or of service as required by this act and shall be a citizen of the United States and an experienced coal miner, and said mine foreman shall devote the whole of his time to his duties at the mine when in opera-

tion, or in case of his necessary absence, an assistant, chosen by him and shall keep a careful watch over the ventilating apparatus, and the air ways, traveling ways, pump and pump timbers and drainage, and shall often instruct, and as far as possible, see that as the miners advance their excavations all dangerous coal, slate and rock overhead are taken down or carefully secured against falling therein, or on the traveling and hauling ways, and that sufficient props, caps and timbers of suitable size are sent into the mine when required, and all props shall be cut square at both ends, and as near as practicable to a proper length for the places where they are to be used, and such props, caps and timbers shall be delivered in the working places of the mine.

Section 2. Every workman in want of props or timbers and cap pieces shall notify the mine foreman or his assistant of the fact at least one day in advance, giving the length and number of props or timbers and cap pieces required, but in cases of emergency the timbers may be ordered immediately upon the discovery of any danger. (The place and manner of leaving the orders for the timber shall be designated and specified in the rules of the mine.) And if, from any cause, the timbers cannot be supplied when required, he shall instruct the persons to vacate all said working places until supplied with the timber needed, and shall see that all water be drained or hauled out of all working places before the miner enters and as far as practicable kept dry while the miner is at work.

Section 3. It shall be the duty of the mine foreman to see that proper cut-throughs are made in all the room pillars at such distances apart as in the judgment of the mine inspector may be deemed requisite, not more than thirty-five nor less than sixteen yards each, for the purpose of ventilation, and the ventilation shall be conducted through said cut-through into rooms by means of check doors made of canvas or other suitable material, placed on the entries, or in other suitable places, and he shall not permit any room to be opened in advance of the ventilating current. Should the mine inspector discover any room, entry, air-way or other working places being driven in advance of the air current contrary to the requirements of this section, he shall order the workmen working in such places to cease work at once until the law is complied with.

Section 4. In all hauling roads, on which hauling is done by animal power, and whereon men have to pass to and from their work, holes for shelter, which shall be kept clear of obstruction, shall be made at least every thirty yards and be kept whitewashed, but shelter holes shall not be required in entries from which rooms are driven at regular intervals not exceeding fifty feet, where there is a space four feet between the wagon and rib, it shall be deemed sufficient for shelter. On all hauling roads whereon hauling is done by ma-



chinery, and all gravity or inclined planes inside mines upon which the persons employed in the mine must travel on foot to and from their work, such shelter holes shall be cut not less than two feet six inches into the strata and not more than fifteen yards apart, unless there is a space of at least six feet from the side of the car to the side of the roadway, which space shall be deemed sufficient for shelter: Provided, That this requirement shall not apply to any parts of mines which parts were opened prior to the passage of this act if deemed impracticable by the mine inspector.

Section 5. The mine foreman shall measure the air current at least once a week at the inlet and outlet and at or near the faces of the entries, and shall keep a record of such measurements. An anemometer shall be provided for this purpose by the operator of the mine. It shall be the further duty of the mine foreman to require the workmen to use locked safety lamps when and where required by this act.

Section 6. The mine foreman shall give prompt attention to the removal of all dangers reported to him by the fire boss or any other person working in the mine, and in mines where a fire boss is not employed, the said mine foreman or his assistant shall visit and examine every working place therein at least once every alternate day while the miners of such place are or should be at work, and shall direct that each and every working place be properly secured by props or timbers, and that no person shall be directed or permitted to work in an unsafe place unless it be for the purpose of making it safe: Provided, That if the owner or operator of any mine employing a fire boss shall require the mine foreman to examine every working place every alternate day, then it shall be the duty of the mine foreman to do so.

Section 7. When the mine foreman is unable personally to carry out all the requirements of this act as pertaining to his duties, he shall employ a competent person or persons, not objectionable to the operator, to act as his assistant or assistants, who shall act under his instructions, and in all mines where fire-damp is generated the said assistant or assistants shall possess a certificate of competency as mine foreman or fire boss.

Section 8. A suitable record book, with printed head lines, prepared by and approved by the mine inspector, the same to be provided at the expense of the Commonwealth, shall be kept at each mine generating explosive gases, and immediately after each examination of the mine made by the fire boss or fire bosses, a record of the same shall be entered in said book, signed by the person or persons making such examinations, which shall clearly state the nature and location of any danger which he or they may have discovered, and the fire boss or fire bosses shall immediately report such



danger and the location of the same to the mine foreman, whose duty it shall be to remove the danger, or to cause the same to be done forthwith as far as practicable, and the mine foreman shall also each day countersign all reports entered by the fire boss or fire bosses. At all mines the mine foreman shall enter in a book provided as above by the mine inspector, a report of the condition of the mine, signed by himself, which shall clearly state any danger that may have come under his observation during the day, and shall also state whether he has a proper supply of material on hand for the safe working of the mine, and whether all requirements of the law are strictly complied with. He shall, once each week, enter or cause to be entered, plainly, with ink, in said book, a true record of all air measurements required by this act, and such books shall at all times, be kept at the mine office for examination by the mine inspector of the district and any other person working in the mines.

#### ARTICLE VII.

##### Timber and Other Mine Supplies, Et Cetera.

Section 1. It shall be the duty of the superintendent, on behalf and at the expense of the operator to keep on hand at the mines at all times, a full supply of all materials and supplies required to preserve the health and safety of the employes as ordered by the mine foreman and required by this act. He shall at least once a week, examine and countersign—which countersignature of the superintendent shall be held, under this act to have no further bearing than the evidence of the fact that the mine superintendent has read the matter entered on the book—all reports entered in the mine record book, and if he finds that the law is being violated in any particular, he shall order the mine foreman to comply with its provisions forthwith. If from any cause he cannot procure the necessary supplies or materials as aforesaid, he shall notify the mine foreman, whose duty it shall be to withdraw the men from the mine or part of mine until such supplies or materials are received.

Section 2. The superintendent of the mine shall not obstruct the mine foreman or other officials in their fulfillment of any of the duties required by this act. At mines where superintendents are not employed, the duties that are herein prescribed for the superintendent shall devolve upon the mine foreman.

#### ARTICLE VIII.

##### Steam Boilers, Stables, Regulations for the Use of Oil, Powder, Et Cetera.

Section 1. After the passage of this act it shall be unlawful to place a main or principal ventilating fan shed inside of any bituminous coal mine wherein explosive gas has been detected or in which the

air current is contaminated with coal dust. No stationery steam boiler shall be placed in any bituminous coal mine, unless said steam boiler be placed within fifty feet from the bottom of an up-cast shaft, which shaft shall not be less than twenty-five square feet in area, and after May thirtieth, one thousand eight hundred and ninety-five, no stationary steam boiler shall be permitted to remain in any bituminous coal mine, only as aforesaid.

Section 2. It shall not be lawful after the passage of this act to provide any horse or mule stables inside of bituminous coal mines, unless said stables are excavated in the solid strata or coal seams, and no wood or other combustible material shall be used excessively in the construction of said stables, unless surrounded by or incased by some incombustible material. The air current used for ventilating said stable shall not be intermixed with the air current used for ventilating the working parts of the mine, but shall be conveyed directly to the return air current, and no open light shall be permitted to be used in any stable in any mine.

Section 3. No hay or straw shall be taken into any mine, unless pressed and made up into compact bales, and all hay or straw taken into the mines as aforesaid, shall be stored in a storehouse excavated in the solid strata or built in masonry for that purpose. After January first, one thousand eight hundred and ninety-four, no horse or mule stable or storehouse, only as aforesaid, shall be permitted in any bituminous coal mine.

Section 4. No explosive oil shall be used or taken into bituminous coal mines for lighting purposes, and oil shall not be stored or taken into the mines in quantities exceeding five gallons. The oiling or greasing of cars inside of the mines is strictly forbidden unless the place where said oil or grease is used is thoroughly cleaned at least once every day to prevent the accumulation of waste oil or grease on the roads or in the drains at that point. Not more than one barrel of lubricating oil shall be permitted in the mine at any one time. Only a pure animal or pure cotton-seed oil or oils, that shall be as free from smoke as pure animal or pure cotton-seed oil, shall be used for illuminating purposes in any bituminous mine. Any person found knowingly using explosive or impure oil, contrary to this section, shall be prosecuted as provided for in section two of article twenty-one of this act.

Section 5. No powder or high explosive shall be stored in any mine, and no more of either article shall be taken into the mine at any one time than is required in any one shift, unless the quantity be less than five pounds, and in all working places where locked safety lamps are used blasting shall only be done by the consent and in the presence of the mine foreman, his assistant or fire boss, or any competent party designated by the mine foreman for that pur-

pose; whenever the mine inspector discovers that the air in any mine is becoming vitiated by the unnecessary blasting of the coal, he shall have the power to regulate the use of the same and to designate at what hour of the day blasting may be permitted.

#### ARTICLE IX.

##### Opening for Drainage, Et Cetera, on Other Lands.

Section 1. If any person, firm or corporation is or shall hereafter be seized in his or their own right of coal lands, or shall hold such lands under lease and shall have opened or shall desire to open a coal mine on said land, and it shall not be practicable to drain or ventilate such mines or to comply with the requirements of this act as to ways of ingress and egress or traveling ways by means of openings on lands owned or held under lease by him, them or it, and the same can be done by means of openings on adjacent lands, he, they or it may apply by petition to the court of quarter sessions of the proper county, after ten days' notice to the owner or owners, their agents or attorney, setting forth the facts under oath or affirmation particularly describing the place or places where such opening or openings can be made, and the pillars of coal or other material necessary for the support of such passageway and such right of way to any public road as may be needed in connection with such opening, and that he or they cannot agree with the owner or owners of the land as to the amount to be paid for the privilege of making such opening or openings, whereupon the said court shall appoint three disinterested and competent citizens of the county to view the ground designated and lay out from the point or points mentioned in such petition, a passage or passages not more than eighty feet area by either drift, shaft or slope, or by a combination of any of said methods by any practicable and convenient route to the coal of such person, firm or corporation, preferring in all cases an opening through the coal strata where the same is practicable. The said viewers shall, at the same time, assess the damages to be paid by the petitioner or petitioners to the owner or owners of such lands for the coal and other valuable material to be removed in the excavation and construction of said passage, also for such coal or other valuable material necessary to support the said passage, as well as for a right of way not exceeding fifteen feet in width from any such opening to any public road, to enable persons to gain entrance to the mine through such opening or to provide therefrom, upon the surface, a water course of suitable dimensions to a natural stream to enable the operator to discharge the water from said mine if such right of way shall be desired by the petitioner or petitioners, which damages shall be fully paid before such opening is made. The proceedings shall be recorded in the road docket of the proper county, and the pay of viewers



shall be the same as in road cases; if exceptions be filed they shall be disposed of by the court as speedily as possible, and both parties to have the right to take depositions as in road cases. If, however, the petitioner desires to make such openings or roads or waterways before the final disposition of such exceptions, he shall have the right to do so by giving bond, to be approved by the court securing the damages as provided by law in the case of lateral railroads.

Section 2. It shall be compulsory upon the part of the mine owner or operator to exercise the powers granted by the provisions of the last preceding section for the procuring of a right of way on the surface from the opening of a coal mine to a public road or public roads, upon the request in writing of fifty miners employed in the mine or mines of such owner or operator: Provided however, That with such request satisfactory security be deposited with the mine owner or operator by said petitioners, being coal miners, to fully and sufficiently pay all costs, damages and expenses caused by such proceedings and in paying for such right of way.

Section 3. In any mine or mines, or parts thereof, wherein water may have been allowed to accumulate in large and dangerous quantities, putting in danger the adjoining or adjacent mines and the lives of the miners working therein, and when such can be tapped and set free and flow by its own gravity to any point of drainage, it shall be lawful for any operator or person having mines so endangered, with the approval of the inspector of the district, to proceed and remove the said danger by driving a drift or drifts protected by bore holes as provided by this act, and in removing said danger it shall be lawful to drive across property lines if needful.

And it shall be unlawful for any person to dam or in any way obstruct the flow of any water from said mine or parts thereof, when so set free on any part of its passage to point of drainage.

Section 4. No operator shall be permitted to mine coal within fifty feet of any abandoned mine containing a dangerous accumulation of water, until said danger has been removed by driving a passage way so as to tap and drain off said water as provided for in this act: Provided, That the thickness of the barrier pillars shall be greater and shall be in proportion of one foot of pillar thickness to each one and one-quarter foot of waterhead if, in the judgment of the engineer of the property and that of the district mine inspector, it is necessary for the safety of the persons working in the mine.

Section 5. All operators of bituminous coal mines shall keep posted in a conspicuous place at their mines the general and special rules embodied in and made part of this act, defining the duties of all persons employed in or about said mine, which said rules shall be printed in the English language, and shall also be printed in such



other language or languages as are used by any ten persons working therein. It shall be the duty of the mine inspector to furnish to the operator printed copies of such rules and such translations thereof as are required by this section, and to certify their correctness over his signature. The cost thereof shall be borne by the State.

#### ARTICLE X.

##### Inspectors, Examining Boards, Et Cetera.

Section 1. The board of examiners appointed to examine candidates for the office of mine inspectors under the provisions of the act to which this is a supplement, shall exercise all the powers granted, and perform all the duties required by this supplementary act, and at the expiration of their term of office, and every four years thereafter, the Governor shall appoint, as hereinafter provided, during the month of January, two mining engineers of good repute and three other persons, who shall have passed successful examinations qualifying them to act as mine inspectors or mine foremen in mines generating fire-damp, who shall be citizens of this Commonwealth and shall have attained the age of thirty years and shall have had at least five years of practical experience in the bituminous mines of Pennsylvania, and who shall not be serving at that time in any official capacity at mines, which five persons shall constitute a board of examiners whose duty it shall be to inquire into the character and qualification of candidates for the office of inspector of mines under the provisions of this act.

Section 2. The examining board, so constituted shall meet on the first Tuesday of March following their appointment, in the city of Pittsburgh, to examine applicants for the office of mine inspector: Provided, however, The examining board shall meet two weeks previous to the aforesaid time for the purpose of preparing questions, et cetera, and when called together by the Governor on extra occasions at such time and place as he may designate, and after being duly organized and having taken and subscribed before any officer authorized to administer the same the following oath, namely, "We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for the appointment as inspectors of bituminous coal mines to the best of our abilities, and that in recommending or rejecting said applicant, we will be governed by the evidence of the qualifications to fill the position under the law creating the same, and not by any consideration of political or personal favor; and that we will certify all whom we may find qualified according to the true intent and meaning of the act and none others."

Section 3. The general examination shall be in writing and the manuscript and other papers of all applicants, together with the

tally sheets and the solution of each question as given by the examining board, shall be filed with the Secretary of Internal Affairs as public documents, but each applicant shall undergo an oral examination pertaining to explosive gases and safety lamps, and the examining board shall certify to the Governor the names of all such applicants which they shall find competent to fill this office under the provisions of this act, which names, with the certificates and their percentages and the oaths of the examiners, shall be mailed to the Secretary of the Commonwealth and be filed in his office. No person shall be certified as competent whose percentage shall be less than ninety per centum, and such certificate shall be valid only when signed by four of the members of the examining board.

Section 4. The qualification of candidates for said office of inspectors of mines to be inquired into and certified by said examiners, shall be as follows, namely: They shall be citizens of Pennsylvania, of temperate habits, of good repute as men of personal integrity, and shall have attained the age of thirty years, and shall have had at least five years of practical experience in working of or in the workings of the bituminous mines of Pennsylvania immediately preceding their examination, and shall have had practical experience with fire-damp inside the mines of this country, and upon examination shall give evidence of such theoretical as well as practical knowledge and general intelligence respecting mines and mining and the working and ventilation thereof, and all noxious mine gases, and will satisfy the examiners of their capability and fitness for the duties imposed upon inspectors of mines by the provisions of this act. And the examining board shall immediately after the examination, furnish to each person who came before it to be examined, a copy of all questions whether oral or written, which were given at the examination on printed slips of paper and to be marked solved, right, imperfect or wrong, as the case may be, together with a certificate of competency to each candidate who shall have made at least ninety per centum.

Section 5. The board of examiners may, also at their meeting, or when at any time called by the Governor together for an extra meeting, divide the bituminous coal regions of the State into inspection districts, no district to contain less than sixty nor more than eighty mines, and as nearly as possible equalizing the labor to be performed by each inspector, and at any subsequent calling of the board of examiners this division may be revised as experience may prove to be advisable.

Section 6. The board of examiners shall each receive ten dollars per day for each day actually employed, and all necessary expenses, to be paid out of the State Treasury. Upon the filing of the certificate of the examining board in the office of the Secretary of the

Commonwealth, the Governor shall, from the names so certified, commission one person to be inspector of mines for each district as fixed by the examiners in pursuance of this supplementary act, whose commission shall be for a full term of four years from the fifteenth day of May following: Always provided however, The highest candidate or candidates in percentage shall have priority to be commissioned for a full term or unexpired term before those candidates of lower percentage, and in case of a tie percentage the oldest candidate shall be commissioned.

Section 7. As often as vacancies occur in said office of inspectors of mines, the Governor shall commission for the unexpired term from the names on file, the highest percentage in the office of the Secretary of the Commonwealth, until the number shall be exhausted, and whenever this may occur, the Governor shall cause the afore-said board of examiners to meet, and they shall examine persons who may present themselves for the vacant office of mine inspector as herein provided, and the board of examiners shall certify to the Governor all persons who shall have made ninety per centum in said examination, one of whom to be commissioned by him according to the provisions of this act for the office of mine inspector for the unexpired term, and any vacancy that may occur in the examining board shall be filled by the Governor of this Commonwealth.

Section 8. Each inspector of mines shall receive for his services an annual salary of three thousand dollars and actual traveling expenses, to be paid quarterly by the State Treasurer upon warrant of the Auditor General, and each mine inspector shall keep an office in the district for which he is commissioned and he shall be permitted to keep said office at his place of residence: Provided, A suitable apartment or room be set off for that purpose. Each mine inspector is hereby authorized to procure such instruments, chemical tests and stationery and to incur such expenses of communication from time to time, as may be necessary to the proper discharge of his duties under this act at the cost of the State, which shall be paid by the State Treasurer upon accounts duly certified by him and audited by the proper department of the State.

Section 9. All instruments, plans, books, memoranda, notes and other material pertaining to the office shall be the property of the State, and shall be delivered to their successors in office. In addition to the expenses now allowed by law to the mine inspectors in enforcing the several provisions of this act, they shall be allowed all necessary expenses by them incurred in enforcing the several provisions of said law in the respective courts of the Commonwealth, the same to be paid by the State Treasurer on warrants drawn by the Auditor General after auditing the same; all such accounts presented by the mine inspector to the Auditor General shall be item-



ized and first approved by the court before which the proceedings were instituted.

Section 10. Each mine inspector of bituminous coal mines shall, before entering upon the discharge of his duties, give bond in the sum of five thousand dollars, with sureties to be approved by the president judge of the district in which he resides, conditional for the faithful discharge of his duties, and take an oath or affirmation to discharge his duties impartially and with fidelity to the best of his knowledge and ability. But no person who shall act as manager or agent of any coal mine, or as mining engineer or is interested in operating any coal mine, shall, at the same time act as mine inspector of coal mines under this act.

Section 11. Each inspector of bituminous coal mines shall devote the whole of his time to the duties of his office. It shall be his duty to examine each mine in his district as often as possible, but a longer period of time than three months shall not elapse between said examination, to see that all the provisions of this act are observed and strictly carried out, and he shall make a record of all examinations of mines, showing the condition in which he finds them, especially with reference to ventilation and drainage, the number of persons employed in each mine, the extent to which the law is obeyed and progress made in the improvement of mines, the number of serious accidents and the nature thereof, the number of deaths resulting from injuries received in or about the mines with the cause of such accident or death, which record completed to the thirty-first day of December of each and every year, shall, on or before the fifteenth day of March following, be filed in the office of the Secretary of Internal Affairs, to be by him recorded and included in the annual report of his department.

Section 12. It shall be the duty of the mine inspector on examination of any mine, to make out a written, or partly written and partly printed report of the condition in which he finds such mine and post the same in the office of the mine or other conspicuous place. The said report shall give the date of the visit, the number of cubic feet of air in circulation and where measured, and that he has measured the air at the cut through one or more rooms in each heading or entry, and such other information as he shall deem necessary, and the said report shall remain posted in the office or conspicuous place for one year and may be examined by any person employed in or about the mine.

Section 13. In case the inspector becomes incapacitated to perform the duties of his office or receives a leave of absence from the same from the Governor, it shall be the duty of the judge of the court of common pleas of his district to appoint, upon said mine inspector's application or that five miners or five operators of said inspector's



district, some competent person, recommended by the board of examiners to fill the office of inspector until the said inspector shall be able to resume the duties of his office, and the person so appointed shall be paid in the same manner as is hereinbefore provided for the inspector of mines.

#### ARTICLE XI.

##### Inspectors' Powers, Et Cetera.

Section 1. That the mine inspectors may be enabled to perform the duties herein imposed upon them, they shall have the right at all times to enter any bituminous coal mine to make examinations or obtain information, and upon the discovery of any violation of this act, they shall institute proceedings against the person or persons at fault under the provisions of section two of article twenty-one of this act. In case, however, where, in the judgment of the mine inspector of the district, any mine or part of mine is in such dangerous condition as to jeopardize life or health, he shall at once notify two of the mine inspectors of the other districts, whereupon they shall at once proceed to the mine where the danger exists and examine into the matter, and if, after full investigation thereof, they shall agree in the opinion that there is immediate danger, they shall instruct the superintendent of the mine in writing to remove such condition forthwith, and in case said superintendent shall fail to do so, then they shall apply, in the name of the Commonwealth, to the court of common pleas of the county, or in case the court shall not be in session, to a judge of the said court in chambers in which the mine may be located for an injunction to suspend all work in and about said mine, whereupon said court or judge shall at once proceed to hear, and determine speedily the same, and if the cause appear to be sufficient after hearing the parties and their evidences, as in like cases, shall issue its writ to restrain the working of said mine until all cause of danger is removed, and the cost of said proceedings shall be borne by the owner, lessee or agent of the mine: Provided, That if said court shall find the cause not sufficient, then the case shall be dismissed and the costs shall be borne by the county wherein said mine is located.

#### ARTICLE XII.

##### Inquests, Et Cetera.

Section 1. Whenever, by reason of any explosion or other accidents in any bituminous coal mine or the machinery connected therewith, loss of life or serious personal injury shall occur, it shall be the duty of the person having charge of such mine to give notice thereof

forthwith to the mine inspector of the district and also to the coroner of the county, if any person is killed.

Section 2. If the coroner shall determine to hold an inquest, he shall notify the mine inspector of the district of time and place of holding the same, who shall offer such testimony as he may deem necessary to thoroughly inform the said inquest of the cause of the death, and the said mine inspector shall have authority at any time to appear before such coroner and jury and question or cross-question any witness, and in choosing a jury for the purpose of holding such inquest it shall be the duty of the coroner to empanel a jury, no one of which shall be directly or indirectly interested.

Section 3. It shall be the duty of the mine inspector, upon being notified of any fatal accident as herein provided, to immediately repair to the scene of the accident and make such suggestions as may appear necessary to secure the safety of any persons who may be endangered, and if the results of the accident do not require an investigation by the coroner the said mine inspector shall proceed to investigate and ascertain the cause of the accident and make a record thereof, which he shall file as provided for, and to enable him to make the investigation he shall have power to compel the attendance of persons to testify, and to administer oaths or affirmations, and if it is found upon investigation that the accident is due to the violation of any provisions of this act by any person, other than those who may be deceased, the mine inspector may institute proceedings against such person or persons as provided for in section two of article twenty-one of this act.

Section 4. The cost of such investigation shall be paid by the county in which the accident occurred in the same manner as costs of inquests held by coroners or justices of the peace are paid.

#### ARTICLE XIII.

#### Neglect or Incompetence of Inspectors.

Section 1. The court of common pleas in any county or district, upon a petition signed by not less than fifteen reputable citizens, who shall be miners or operators of mines, and with the affidavit of one or more of said petitioners attached setting forth that any inspector of mines neglects his duties or is incompetent, or that he is guilty of a malfeasance in office, shall issue a citation in the name of the Commonwealth to the said mine inspector to appear on not less than fifteen days' notice, upon a day fixed, before said court, at which time the court shall proceed to inquire into and investigate the allegations of the said petitioners.

Section 2. If the court find that the said mine inspector is neglectful of his duties or incompetent to perform the duties of his office or that he is guilty of malfeasance in office, the court shall certify the

same to the Governor, who shall declare the office of said mine inspector vacant and proceed in compliance with the provisions of this act to supply the vacancy; and the costs of said investigation shall, if the charges are sustained, be imposed upon the mine inspector, but if the charges are not sustained, they shall be imposed upon the petitioners.

#### ARTICLE XIV.

##### Discretionary Powers of Inspectors, Arbitration, Et Cetera.

Section 1. The mine inspectors shall exercise a sound discretion in the enforcement of the provisions of this act, and if the operator, owner, miners, superintendent, mine foreman or other persons employed in or about the mine as aforesaid shall not be satisfied with any decision the mine inspector may arrive at in the discharge of his duties under this act, which said decision shall be in writing signed by the mine inspector, the said owner, operator, superintendent, mine foreman or other person specified above shall either promptly comply therewith or within seven days from date thereof appeal from such decision to the court of quarter sessions of the county wherein the mine is located, and said court shall speedily determine the question involved in said decision and appeal and the decision of said court shall be binding and conclusive.

Section 2. The court or the judge of said court in chambers may in its discretion, appoint three practical, reputable, competent and disinterested persons whose duty it shall be, under instructions of the said court, to forthwith examine such mine or other cause of complaint and report under oath, the facts as they exist or may have been, together with their opinions thereon within thirty days after their appointment. The report of said board shall become absolute unless exceptions thereto shall be filed within ten days after the notice of the filing thereof by the owner, operator, mine superintendent, mine foreman, mine inspector and other persons, as aforesaid, and if exceptions are filed the court shall at once hear and determine the same and the decision shall be final and conclusive.

Section 3. If the court shall finally sustain the decision of the mine inspector, then the appellant shall pay all costs of such proceedings, and if the court shall not sustain the decision of the mine inspector then such costs shall be paid by the county: Provided, That no appeal from any decision made by any mine inspector which can be immediately complied with shall work as a supersedeas to such decisions during the pendency of such appeal, but all decisions shall be in force until reversed or modified by the proper court.



## ARTICLE XV.

## Examinations of Mine Foremen and Fire Bosses.

Section 1. On the petition of the mine inspector the court of common pleas in any county in said district shall appoint an examining board of three persons, consisting of a mine inspector, a miner and an operator or superintendent, which said miner shall have received a certificate of competency as mine foreman in mines generating explosive gases, and the members of said examining board shall be citizens of this Commonwealth, and the persons so appointed shall after being duly organized take and subscribe before an officer authorized to administer the same, the following oath, namely: "We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for the position of mine foremen and fire bosses of bituminous coal mines to the best of our abilities, and that in certifying or rejecting said applicants we will be governed by the evidence of the qualifications to fill the position under the law creating the same and not by any consideration of personal favor; that we will certify all whom we may find qualified and none others."

Section 2. The examining board shall examine any person applying thereto as to his competency and qualifications to discharge the duties of mine foreman or fire boss.

Applicants for mine foreman or fire boss certificates shall be at least twenty-three years of age, and shall have had at least five years' practical experience, after fifteen years of age, as miners, superintendent at or inside of the bituminous mines of Pennsylvania and shall be citizens of this Commonwealth and men of good moral character and of known temperate habits.

The said board shall be empowered to grant certificates of competency of two grades, namely: certificates of first grade, to persons who have had experience in mines generating explosive gases and who shall have the necessary qualifications to fulfil the duties of mine foreman in such mines; and certificates of second grade, to persons who give satisfactory evidence of their ability to act as mine foreman in mines not generating explosive gases.

Section 3. The said board of examiners shall meet at the call of the mine inspector and shall grant certificates to all persons whose examination shall disclose their fitness for the duties of mine foreman as above classified, or fire boss, and such certificates shall be sufficient evidence of the holder's competency for the duties of said position so far as relates to the purposes of this act: Provided, That all persons holding certificates of competency granted under the provisions of the act to which this is a supplement shall continue to



act under this act: And provided further, That any person acting as mine foreman upon a certificate of service under the act to which this is a supplement may continue to act in the same capacity at any mine where the general conditions affecting the health and safety of the persons employed do not differ materially from those at the mine in which he was acting when said certificate was granted: Provided, however, That if such a mine foreman leaves his present employer and secures employment elsewhere at any mine where in the judgment of the mine inspector of the district the conditions affecting the health and safety of the persons employed do differ materially from those at the mine at which he was employed when his certificate was granted, it shall then be the duty of the mine inspector of the district in which he has secured employment to serve written protest against such mine foreman's employment to the operator of said mine.

Section 4. The examining board shall hold their office for a period of four years from the date from their appointment and shall receive five dollars per day for each day necessarily employed and mileage at the rate of three cents per mile for each mile necessarily traveled, and all other necessary expenses connected with the examination shall be paid by the Commonwealth. Each applicant before being examined shall pay the examining board the sum of one dollar, and one dollar additional for each certificate granted, which shall be for the use of the Commonwealth. The foregoing examination shall be held annually in each inspection district.

#### ARTICLE XVI.

##### Suspension of Certificates of Mine Foreman and Fire Bosses.

Section 1. No person shall act as fire boss in any bituminous coal mines, unless granted a certificate of competency by any one of the several examining boards. All applicants applying to any of the examining boards for fire boss certificates shall undergo an oral examination in the presence of explosive gas, and such certificate shall only be granted to men of good moral character and of known temperate habits, and it shall be unlawful for any operator or superintendent to employ any person as fire boss who has not obtained such certificate of competency as required by this act.

Section 2. If the mine foreman or fire boss shall neglect his duties or has incapacitated himself by drunkenness, or has been incapacitated by any other cause for the proper performance of said duties, and the same shall be brought to the knowledge of the operator or superintendent it shall be the duty of such operator or superintendent to discharge such delinquent at once and notify the inspector of the district of such action, whereupon it shall be the duty of

said inspector to inform the court of common pleas of the county who shall issue a citation in the name of the Commonwealth to the said operator, superintendent, mine foreman or fire boss to appear at not less than fifteen days' notice upon a day fixed before said court, at which time the court shall proceed to inquire into and investigate the allegations. If the court finds that the allegations are true, it shall notify the examining board of such finding and instruct the said board to withdraw the certificate of such delinquent during any period of time that said court may deem sufficient, and at the expiration of such time he shall be entitled to a re-examination.

#### ARTICLE XVII.

##### Employment of Boys and Females.

Section 1. No boy under the age of twelve years, or any woman or girl of any age, shall be employed or permitted to be in the workings of any bituminous coal mine for the purpose of employment, or for any other purpose; and no boy under the age of sixteen shall be permitted to mine or load coal in any room, entry or other working place, unless in company with a person over sixteen years of age. If the mine inspector or mine foreman has reason to doubt the fact of any particular boy being as old as this act requires for the service which said boy is performing at any mine, it shall be the duty of said mine inspector or mine foreman to report the fact to the superintendent, giving the name of said boy, and the said superintendent shall at once discharge the said boy.

#### ARTICLE XVIII.

##### Stretchers.

Section 1. It shall be the duty of operators or superintendents to keep at the mouth of the drift, shaft, or slope, or at such other place about the mine as shall be designated by the mine inspector, a stretcher properly constructed, and a woolen and a waterproof blanket in good condition for use in carrying away any person who may be injured at the mine: Provided, That where more than two hundred persons are employed two stretchers and two woolen and two waterproof blankets shall be kept. And in mines generating fire-damp a sufficient quantity of linseed or olive oil, bandages and linen shall be kept in store at the mines for use in emergencies, and bandages shall be kept at all mines.

#### ARTICLE XIX.

##### Annual Reports.

Section 1. On or before the twenty-fifth day of January in each year the operator or superintendent of every bituminous coal mine

shall send to the mine inspector of the district in which said mine is located a correct report, specifying with respect to the year ending the thirty-first day of December preceding, the name of the operator and officers of the mine and the quantity of coal mined. The report shall be in such form and give such information regarding said mines as may be from time to time required and prescribed by the mine inspector of the district. Blank forms for such reports shall be furnished by the Commonwealth.

#### ARTICLE XX.

##### Additional Duties of Mine Foreman.

Section 1. Rule 1. The mine foreman shall attend personally to his duties in the mine and carry out all the instructions set forth in this act and see that the regulations prescribed for each class of workmen under his charge are carried out in the strictest manner possible, and see that any deviation from or infringements of any of them are promptly adjusted.

Rule 2. He shall cause all stoppings along the airways to be properly built.

Rule 3. He shall see that the entries at such places where road grades necessitate sprags or brakes to be applied or removed shall have a clear level width of not less than two and one-half feet, between the side of car and the rib to allow the driver to pass his trip safely and keep clear of the cars there.

Rule 4. He shall direct that all miners undermine the coal properly before blasting it and that blasting shall be done at only such hours as he shall direct and shall order the miners to set sprags under the coal, when necessary for safety while undermining at distances not exceeding seven feet apart, and he shall not allow the improper drawing of pillars.

Rule 5. In mines where fire damp is generated when the furnace fire has been put out it shall not be relighted, except in his presence, or that of his assistant under his instructions.

Rule 6. In case of accident to a ventilating fan or its machinery, or the fan itself, whereby the ventilation of the mine would be seriously interrupted, it shall be his duty to order the men to immediately withdraw from the mine and not allow their return to their work until the ventilation has been restored and the mine has been thoroughly examined by him or his assistant and reported to be safe.

Rule 7. He shall see that all dangerous places are properly fenced off and proper danger signal boards so hung on such fencing, that they may be plainly seen; he shall also travel all air roads and examine all the accessible openings to old workings as often as is necessary to insure their safety.

Rule 8. He shall provide a book or sheet to be put in some convenient place, or places, upon which shall be made a place for the numbers used by the miners with space sufficient to each number, so that the miners can write plainly the quantity of props, their approximate length and the number of caps and other timbers which they require, together with the date of the order. Said book or sheets shall be preserved for thirty days from their date.

### Duties of Fire Boss.

Rule 9. He shall enter the mine before the men have entered it, and before proceeding to examine the same, he shall see that the air current is traveling in its proper course, and if all seems right, he shall proceed to examine the workings.

Rule 10. He shall not allow any person, except those duly authorized to enter or remain in any part of the mine through which a dangerous accumulation of gas is being passed in the ventilating current from any other part of the mine.

Rule 11. He shall frequently examine the edge and accessible parts of new falls and old gobs and air courses, and he shall report at once any violation of this act to the mine foreman.

### Duties of Miners.

Rule 12. He shall examine his working place before beginning work and take down all dangerous slate, or otherwise make it safe by properly timbering the same before commencing to dig or load coal, and in mines where fire bosses are employed, he shall examine his place to see whether the fire boss has left the proper marks indicating his examination thereof, and he shall at all times be very careful to keep his working place in a safe condition during working hours.

Rule 13. Should he at any time find his place becoming dangerous either from gas or roof, or from any unusual condition which may have arisen, he shall at once cease working, and inform the mine foreman or his assistant of such danger, and before leaving such place he shall place some plain warning at the entrance thereto to warn others from entering into the danger.

Rule 14. It shall be the duty of every miner to mine his coal properly and to set sprags under the coal while undermining to secure it from falling and, after each blast, he shall exercise great care in examining the roof and coal and shall secure them safely before beginning work.

Rule 15. When places are liable to generate sudden volumes of fire damp, or where locked safety lamps are used, no miner shall be allowed to fire shots except under the supervision and with the con-



sent of the mine foreman, or his assistant, or other competent person designated by the mine foreman for that purpose.

### Duties of Drivers.

Rule 16. When a driver has occasion to leave his trip he must be careful to see that it is left, when possible, in a safe place, secure from cars or other dangers, or from endangering drivers of trip following.

Rule 17. The driver must take great care while taking his trips down grades to have the brakes or sprags so adjusted that he can keep the cars under control and prevent them from running onto himself or others.

Rule 18. He shall not leave any cars standing where they may materially obstruct the ventilating current, except in case of accident to the trip.

### Duties of Trip Riders or Runners.

Rule 19. He shall exercise great care in seeing that all hitchings are safe for use and see that all the trip is coupled before starting, and should he at any time see any material defect in the rope, link or chain, he shall immediately remedy such defect or, if unable to do so, he shall detain the trip and report the matter to the mine foreman.

### Duties of Engineer.

Rule 20. It shall be the duty of the engineer to keep a careful watch over his engine and all machinery under his charge and see that the boilers are properly supplied with water, cleaned and inspected at proper intervals, and that the steam pressure does not exceed at any time the limit allowed by the superintendent.

Rule 21. He shall make himself acquainted with the signal codes provided for in this act.

Rule 22. He shall not allow any unauthorized person to enter the engine house, neither shall he allow any person to handle or run the engine, without the permission of the superintendent.

Rule 23. When workmen are being raised or lowered he shall take special precautions to keep the engine well under control.

Rule 24. The locomotive engineer must keep a sharp lookout ahead of his engine and sound the whistle or alarm bell frequently when coming near the partings or landings; he must not exceed the speed allowed by the mine foreman or superintendent. He must not allow any person except his attendants, to ride on the engine or on the full cars.

### Duties of Firemen.

Rule 25. Every fireman and other person in charge of a boiler or boilers for the generation of steam shall keep a careful watch of the same; he shall see that the steam pressure does not at any time exceed the limit allowed by the superintendent; he shall frequently try the safety-valve and shall not increase the weight on the same; he shall maintain a proper depth of water in each boiler, and if anything should happen to prevent this, he shall report the same without delay to the superintendent, or other person designated by the superintendent, and take such other action as may, under the particular circumstances, be necessary for the protection of life and the preservation of property.

### Duties of Fan Engineer.

Rule 26. The engineer in charge of any ventilating fan must keep it running at such speed as the mine foreman directs in writing. In case of accident to the boiler or fan machinery, not requiring the immediate withdrawal of the men from the mine by reason of serious interruption of the ventilation, he shall invariably notify the mine foreman. If ordinary repairs of the fan or machinery becomes necessary, he must give timely notice to the mine foreman and await his instructions before stopping it. He shall also examine at the beginning of each shift all the fan bearings, stays and other parts, and see that they are kept in proper working order. Should it become impossible to run the fan or necessary to stop it to prevent destruction, he shall then at once stop it and notify the mine foreman immediately and give immediate warning to persons in the mine.

### Duties of Furnacemen.

Rule 27. The furnace man must attend to his duties with regularity, and in case he should be likely to be off work for any reason whatever, he must give timely notice to the mine foreman.

Rule 28. The furnace man must at all times keep a clear, brisk fire and the fire must not be smothered with coal or slack during working hours, nor shall he allow ashes to accumulate excessively on or under the bars, or in the approaches to the furnace, and ashes shall be cooled before being removed.

Rule 29. The furnace man must promptly obey the instructions of the mine foreman.

### SHAFTS AND SLOPES.

#### Duties of Hookers-On.

Rule 30. The hookers-on at the bottom of any slope shall be very careful to see that the cars are properly coupled to a rope or chain

and that the safety-catch or other device is properly attached to the car before giving the signal to the engineer.

### Duties of Cagers.

Rule 31. The cager at the bottom of any shaft shall not attempt to withdraw the car until the cage comes to rest, and when putting the full car on the cage he must be very careful to see that the springs or catches are properly adjusted so as to keep the car in its proper place before giving the signal to the engineer.

Rule 32. At every shaft or slope mine in which provision is made in this act for lowering and hoisting persons, a headman and footman shall be designated by the superintendent or mine foreman, who shall be at their proper places from the time that persons begin to descend until all the persons who may be at the bottom of said shaft or slope, when quitting work, shall be hoisted; such headman and footman shall personally attend to the signals and see that the provisions of this act in respect to lowering or hoisting persons in shafts or slopes shall be complied with.

Rule 33. He shall not allow any tools to be placed on the same cage with men or boys, nor on either cage when persons are being hoisted out of the mine, or being lowered into the mine, except when for the purpose of repairing the shaft or machinery therein. The men shall place their tools in cars provided for that purpose which car, or cars, shall be hoisted or lowered before and after the men have been hoisted or lowered. And he shall immediately inform the mine foreman of any violation of this rule.

Rule 34. He shall also see that no driver, or other person, ascends the shaft with any horse or mule, unless the said horse or mule is secured in a suitable box, or safely penned, and only the driver in charge of said horse or mule shall accompany it in any case.

### Duties of Top Man.

Rule 35. The top man of any slope, or incline plane, shall be very careful to close the safety block, or other device, as soon as the cars have reached the landing so as to prevent any loose or runaway cars from descending the slope, or incline plane, and in no case shall such safety block, or other device, be withdrawn until the cars are coupled to the rope or chain and the proper signal given. He shall carefully inspect daily all the machinery in and about the check house, and the rope used for lowering the coal and promptly report any defect discovered to the superintendent, and shall use great care in attaching securely the wagons or cars to the rope and carefully lower the same down the incline. He shall ring the alarm bell in case of accident, and when necessary immediately set free to act, the drop logs or safety switch.



Rule 36. The top man of any shaft shall see that the springs or keeps for the cage to rest upon are kept in good working order, and when taking the full car off he must be careful that no coal or other material is allowed to fall down the shaft.

Rule 37. He shall be at his proper place from the time that persons begin to descend until all the persons who may be at the bottom of said shaft or slope when quitting work shall be hoisted. Such headman and footman shall personally attend to the signals, and see that the provisions of this act in respect to lowering and hoisting persons in shafts or slopes shall be complied with.

Rule 38. He shall not allow any tools to be placed on the same cage with men or boys, nor on either cage when persons are being lowered into the mine, except when for the purpose of repairing the shaft or the machinery therein. The men shall place their tools in cars provided for that purpose, which car or cars shall be lowered before and after the men have been lowered.

Rule 39. He shall also see that no driver, or other person, descends the shaft with any horse or mule, unless the said horse or mule is secured in a suitable box or safely penned, and only the driver in charge of said horse or mule shall accompany it in any case.

#### General Rules.

Rule 40. If any person shall receive any injury in or about the mine and the same shall come within the knowledge of the mine foreman, and if he shall be of the opinion that the injured person requires medical or surgical treatment, he shall see that said injured person receives the same, and in case of inability of such injured person to pay therefor the same shall be borne by the county. The mine foreman shall report monthly to the mine inspector of the district on blanks furnished by said inspector for that purpose, all accidents resulting in personal injury.

Rule 41. No unauthorized person shall enter the mine without permission from the superintendent or mine foreman.

Rule 42. No person in a state of intoxication shall be allowed to go into or loiter about the mine.

Rule 43. All employes shall inform the mine foreman or his assistant of the unsafe condition of any working place, hauling roads or traveling ways, or of damage to doors, brattices or stoppings, or of obstructions in the air passages when known to them.

Rule 44. No person shall be employed to blast coal, rock or slate, unless the mine foreman is satisfied that such a person is qualified by experience to perform the work with ordinary care.

Rule 45. The mine superintendent or mine foreman shall cause to be constructed safety blocks or some other device for the purpose of preventing cars from falling into the shaft, or running away on



slopes or incline planes; and safety switches, drop logs or other device shall be used on all slopes and incline planes; and said safety blocks, safety switches or other device must be maintained in good working order.

Rule 46. Every workman employed in the mine shall examine his working place before commencing work, and after any stoppage of work during the shift he shall repeat such examination.

Rule 47. No person shall be allowed to travel on foot to or from his work on any incline plane, dilly or locomotive roads, when other good roads are provided for that purpose.

Rule 48. Any employe or other person who shall wilfully deface, pull down or destroy any notice board, danger signal, general or special rules or mining laws, shall be prosecuted as provided for in section two, article twenty-one of this act.

Rule 49. No powder or high explosive shall be taken into the mine in greater quantities than required for use in one shift, unless such quantity be less than five pounds, and all powder shall be carried into the mine in metallic canisters.

Rule 50. Powder in quantities exceeding twenty-five pounds, or other explosives in quantities exceeding ten pounds, shall not be stored in any tippie or any weighing office, nor where workmen have business to visit, and no naked lights shall be used while weighing and giving out powder.

Rule 51. All persons except those duly authorized, are forbidden to meddle or tamper in any way with any electric or signal wires in or about the mines.

Rule 52. No greater number of persons shall be hoisted or lowered at any one time in any shaft than is permitted by the mine inspector, and whenever said number of persons shall arrive at the bottom of the shaft in which persons are regularly hoisted or lowered, they shall be furnished with an empty cage and be hoisted, and in cases of emergency a less number shall be promptly hoisted. Any person or persons crowding or pushing to get on or off the cages shall be deemed guilty of a misdemeanor.

Rule 53. Each workman, when engaged shall have his attention directed to the general and special rules by the person employing him.

Rule 54. Workmen and all other persons are expressly forbidden to commit any nuisance or throw into, deposit, or leave coals or dirt, stones or other rubbish in the air way or road so as to interfere with, pollute, or hinder the air passing into and through the mine.

Rule 55. No one, except a person duly authorized by the mine foreman, shall have in his possession a key or other instrument for the purpose of unlocking any safety lamp in any mine where locked safety lamps are used.

Rule 56. Every abandoned slope, shaft, air hole or drift shall be properly fenced around or across its entrance.

Rule 57. No safety lamps shall be entrusted to any person for use in mines until he has given satisfactory evidence to the mine foreman that he understands the proper use thereof and danger of tampering with the same.

Rule 58. No person shall ride upon or against any loaded car or cage in any shaft or slope in or about any bituminous coal mine; no person other than the trip runner shall be permitted to ride on empty trips on any slope, inclined plane or dilly road, when the speed of the cars exceeds six miles per hour. The transportation of tools in and out of the mines shall be under the direction of the mine foreman.

Rule 59. No persons other than the drivers or trip runners shall be permitted to ride on the full cars.

Rule 60. In mines where coal dust has accumulated to a dangerous extent, care shall be exercised to prevent said dust from floating in the atmosphere by sprinkling it with water, or otherwise, as far as practicable.

Rule 61. In cutting of clay veins, spars or faults in entries, or other narrow workings going into the solid coal in mines where explosive gases are generated in dangerous quantities, a bore hole shall be kept not less than three feet in advance of the face of the work, or an advance of any shot hole drilled for a blast to be fired therein.

Rule 62. The engineer placed in charge of an engine whereby persons are hoisted out of or lowered into any mine shall be a sober competent person, and not less than twenty-one years of age.

Rule 63. When a workman is about to fire a blast he shall be careful to notify all persons who might be endangered thereby, and shall give sufficient alarm so that any person or persons approaching shall be warned of the danger.

Rule 64. In every shaft or slope where persons are hoisted or lowered by machinery, as provided by this act, a topman and cager shall be appointed by the superintendent or mine foreman.

Rule 65. Whenever a workman shall open a box containing powder or other explosives, or while in any manner handling the same, he shall first place his lamp not less than five feet from such explosive and in such a position that the air current cannot convey sparks to it, and he shall not smoke while handling explosives.

Rule 66. An accumulation of gas in mines shall not be removed by brushing.

Rule 67. When gas is ignited by blast or otherwise, the person having charge of the place where the said gas is ignited, shall immediately extinguish it if possible, and if unable to do so shall immediately notify the mine foreman or his assistants of the fact. Workmen must see that no gas blowers are left burning upon leaving their working places.

Rule 68. All ventilating fans used at mines shall be provided with recording instruments by which the number of revolutions or the effective ventilating pressure of the fan shall be registered and the registration with its date for each and every day shall be kept in the office of the mine for future reference for one year from its date.

Rule 69. Where the clothing or wearing apparel of employes becomes wet by reason of working in wet places in the mines, it shall be the duty of the operator or superintendent of each mine, at the request in writing of the mine inspector, who shall make such request upon the petition of any five miners of any one mine in the district working in the aforesaid wet places, to provide a suitable building which shall be convenient to the principal entrances of such mine for the use of the persons employed in wet places therein for the purpose of washing themselves and changing their clothes when entering the mine and returning therefrom. The said building shall be maintained in good order and be properly lighted and heated and shall be provided with facilities for persons to wash. If any person or persons shall neglect or fail to comply with the provisions of this article or maliciously injure or destroy, or cause to be injured or destroyed, the said building or any part thereof, or any of the appliances or fittings used for supplying light and heat therein, or doing any act tending to the injury or destruction thereof, he or they shall be deemed guilty of an offense against this act.

Rule 70. In all shafts and slopes where persons, coal or other materials are hoisted by machinery the following code of signals shall be used:

One rap or whistle to hoist coal or other material.

One rap or whistle to stop cage or car when in motion.

Two raps or whistles to lower cage or car.

Three raps or whistles when persons are to be hoisted, and for engineer to signal back ready when persons are to be hoisted, after which persons shall get on the cage or car, then one rap shall be given to hoist.

Four raps or whistles, to turn on steam to the pumps.

But a variation from the above code of signals may be used by permission of the mine inspector: Provided, That in any such case such changed code shall be printed and posted.

Rule 71. No person or persons shall go into any old shaft or abandoned part of the mine or into any other place which is not in actual course of working without permission from the mine foreman, nor shall they travel to and from their work except by the traveling way assigned for that purpose.

Rule 72. No steam pipes through which high pressure steam is conveyed for the purpose of driving pumps or other machinery, shall be permitted on traveling or haulage ways, unless they are encased



in asbestos, or some other suitable non-conducting material, or are so placed that the radiation of heat into the atmosphere of the mine will be prevented as far as possible.

Rule 73. Where a locomotive is used for the purpose of hauling coal out of a mine, the tunnel or tunnels through which the locomotive passes shall be properly ventilated and kept free as far as practicable of noxious gases, and a ventilating apparatus shall be provided by the operator to produce such ventilation when deemed necessary and practicable to do so by the mine inspector.

Rule 74. No inexperienced person shall be employed to mine out pillars unless in company with one or more experienced miners, and by their consent.

#### ARTICLE XXI.

##### Penalties.

Section 1. Any person or persons whomsoever, who shall intentionally or carelessly injure any shaft, safety lamp, instrument, air-course or brattice, or obstruct or throw open air ways, or take matches for any purpose, or pipes or other smokers' articles beyond any station inside of which locked safety lamps are used, or injure any part of the machinery, or open a door in the mine and not close it again immediately or open any door which opening is forbidden, or disobey any order given in carrying out the provisions of this act, or do any other act whatsoever whereby the lives or the health of persons or the security of the miners or the machinery is endangered, shall be deemed guilty of a misdemeanor and may be punished in a manner provided for in this article.

Section 2. The neglect or refusal to perform the duties required to be performed by any section of this act by the parties therein required to perform them, or the violation of any of the provisions or requirements hereof, shall be deemed a misdemeanor and shall upon conviction thereof in the court of quarter sessions of the county wherein the misdemeanor was committed, be punishable by a fine not exceeding five hundred dollars or imprisonment in the county jail for a period not exceeding six months, or both, at the discretion of the court.

Section 3. That for any injury to person or property occasioned by any violation of this act, or any failure to comply with its provisions by any owner, operator or superintendent of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby, and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost for like recovery of damages for the injury they shall have sustained.



## ARTICLE XXII.

## Definition.

Section 1. Coal Mine. In this act the term "coal mine" includes the shafts, slopes, adits, drifts or inclined planes connected with excavations penetrating coal stratum or strata, which excavations are ventilated by one general air current or divisions thereof and connected by one general system of mine railroads over which coal may be delivered to one or more common points outside the mine, when such is operated by one operator.

Excavations and Workings. The term "excavations and workings" includes all the excavated parts of a mine, those abandoned as well as the places actually being worked, also all underground workings and shafts, tunnels and other ways and openings, all such shafts, slopes, tunnels and other openings in the course of being sunk or driven, together with all roads, appliances, machinery and material connected with the same below the surface.

Shaft. The term "shaft" means a vertical opening through the strata, and which is or may be used for the purpose of ventilation or drainage or for hoisting men or material or both in connection with the mining of coal.

Slope. The term "slope" means an incline way or opening used for the same purpose as a shaft.

Operator. The term "operator" means any firm, corporation or individual operating any coal mine or part thereof.

Superintendent. The term "superintendent" means the person who shall have, on behalf of the operator, immediate supervision of one or more mines.

Bituminous Mines. The term "bituminous" coal mines shall include all coal mines in the State not now included in the anthracite boundaries.

The provisions of this act shall not apply to any mine employing less than ten persons in any one period of twenty-four hours.

## ARTICLE XXIII.

Section 1. That all acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 15th day of May, A. D. 1893.

ROBT. E. PATTISON.

## AN ACT

Requiring the weighing of bituminous coal before screening, and providing a penalty for the violation thereof.

Section 1. Be it enacted, &c., That it shall be unlawful for any

mine owner, lessee or operator of any bituminous coal mine in this Commonwealth, employing miners at bushel or ton rates, or other quantity, to pass the output of coal mined by said miners over any screen or other device which shall take any part from the weight, value or quantity thereof, before the same shall have been weighed and duly credited to the employe sending the same to the surface and accounted for at the legal rate of weight fixed by laws of this Commonwealth.

Section 2. Any owner, lessee or operator of any bituminous coal mine, violating the provisions of this act, shall be deemed guilty of a misdemeanor, and shall, upon conviction, for each and every such offense be punished by a fine of not less than one hundred (\$100) dollars nor more than five hundred (\$500) dollars, or by imprisonment in the county jail for a period not to exceed ninety days, or by both such fine and imprisonment, at the discretion of the court; proceedings to be instituted in any court of competent jurisdiction.

Section 3. All acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL H. HASTINGS.

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## AN ACT

To amend section four of article eight of an act, entitled "An act relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein," approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three permitting the use of mineral oils in bituminous mines when used in approved safety lamps.

Section 1. Be it enacted, &c., That section four of article eight of an act, entitled "An act relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein," approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three, which reads as follows:

"Section 4. No explosive oil shall be used or taken into bituminous coal mines for lighting purposes and oil shall not be stored or taken into the mines in quantities exceeding five gallons. The oiling or greasing of cars inside of the mines is strictly forbidden unless the place where said oil or grease is used is thoroughly cleaned at least once every day to prevent the accumulation of waste oil or grease on the roads or in the drains at that point. Not more than one barrel of lubricating oil shall be permitted in the mine at any one time. Only a pure animal or pure cotton-seed oil or oils that shall be as free from smoke as pure animal or pure cotton-seed oil shall be used for illuminating purposes in any bituminous mine. Any person

found knowingly using explosive or impure oil contrary to this section shall be prosecuted as provided for in section two of article twenty-one of this act," be and the same is hereby amended to read as follows:

Section 4. No explosive oil shall be used or taken into bituminous coal mines for lighting purposes except when used in approved safety lamps and oil shall not be stored or taken into the mines in quantities exceeding five gallons. The oiling or greasing of cars inside of the mines is strictly forbidden unless the place where said oil or grease is used is thoroughly cleaned at least once every day to prevent the accumulation of waste oil or grease on the roads or in the drains at that point. Not more than one barrel of lubricating oil shall be permitted in the mine at any one time. Only a pure animal oil or pure cotton-seed oil or oils that shall be as free from smoke as pure animal or pure cotton-seed oil shall be used for illuminating purposes in any bituminous mine. Any person found knowingly using explosive or impure oil contrary to this section shall be prosecuted as provided for in section two of article twenty-one of this act.

Approved—The 28th day of April, A. D. 1899.

WILLIAM A. STONE.

# General Mining Laws.

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## AN ACT

To provide payment to the miner for all clean coal mined by him.

Section 1. Be it enacted, &c., That from and after the passage of this act all individuals, firms and corporations engaged in mining coal in this Commonwealth, who, instead of dumping all the cars that come from the mine into a breaker or chutes, shall switch out one or more of the cars for the purpose of examining them, and determining the actual amount of slate or refuse, by removing said slate or refuse from the car, and who shall, after so doing, willfully neglect to allow the miner in full for all clean coal left after the refuse, dirt or slate is taken out, at the same rate paid at the mine for clean coal less the actual expense of removing said slate or refuse, he shall be deemed guilty of a misdemeanor.

Section 2. That any individual, firm or corporation as aforesaid, violating the provisions of this act, upon suit being brought and conviction had, shall be sentenced by the court to pay a fine of not more than one hundred dollars, and to make restitution by paying to the miner the amount to which, under this act, he would be entitled for the coal mined by him, and for which he was not paid.

Approved—The 13th day of June, A. D. 1883.

ROBT. E. PATTISON

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## AN ACT

To provide for the recovery of the bodies of workmen enclosed, buried or entombed in coal mines.

Section 1. Be it enacted, &c., That whenever any workman or workmen shall heretofore have been, or shall hereafter be enclosed, entombed or buried in any coal mine in this Commonwealth, it shall be the duty of the court, sitting in equity, in the county wherein such workman or workmen are enclosed, entombed or buried, upon the petition of any of the relatives of those enclosed, entombed or buried, to make an order of court for the petitioner to take testimony in order that the court may ascertain whether such workman or



workmen, or the body or bodies of such workman or workmen, can be recovered or taken out of said mine.

If, after full hearing, it shall appear to the court that such undertaking is feasible or practicable, said court may forthwith issue a peremptory mandamus to the owner or owners, lessee or lessees, operator or operators of such coal company, to forthwith proceed to work for and recover and take out the body or bodies of such workman or workmen, and said court shall have full authority to enforce such peremptory mandamus in the manner already provided for the enforcement of such process.

Approved—The 9th day of May, A. D. 1889.

JAMES A. BEAVER.

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### AN ACT

For the better protection of employes in and about the coal mines by preventing mine superintendent, mine foremen and assistants from receiving or soliciting any sums of money or other valuable consideration from men while in their employ, and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That on and after the passage of this act any mine superintendent, mine foreman or assistant foreman, or any other person or persons who shall receive or solicit any sum of money or other valuable consideration, from any of his or their employes for the purpose of continuing in his or their employ, shall be guilty of a misdemeanor, and upon conviction shall be subject to a fine not less than fifty dollars, nor more than three hundred dollars, and undergo an imprisonment of not less than six months, or both, at the discretion of the court.

Section 2. All acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 15th day of June, A. D. 1897.

DANIEL H. HASTINGS.

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### AN ACT

Establishing a Bureau of Mines in the Department of Internal Affairs of Pennsylvania, defining its purposes and authority, providing for the appointment of a chief of said bureau and assistants, and fixing their salaries and expenses.

Section 1. Be it enacted, &c., That there is hereby established in the Department of Internal Affairs of Pennsylvania a bureau to be known as the Bureau of Mines, which shall be charged with the

supervision of the execution of the mining laws of this Commonwealth, and the care and publication of the annual reports of the inspectors of coal mines.

Section 2. The chief officer of the bureau shall be denominated Chief of the Bureau of Mines, and shall be appointed by the Governor, by and with the advice and consent of the Senate, within thirty days after the final passage of this act, and every four years thereafter, who shall be commissioned by the Governor to serve a term of four years from the date of his appointment, and until his successor is duly qualified, and shall receive an annual salary of three thousand dollars and traveling expenses; and in case of a vacancy in the office of Chief of said Bureau, by reason of death, resignation or otherwise, the Governor shall appoint a qualified person to fill such vacancy for the unexpired balance of the term.

Section 3. The Chief of the Bureau of Mines shall be a competent person having had at least ten years practical experience in the working and ventilation of coal mines of this State, and a practical and scientific knowledge of all noxious and dangerous gases found in such mines. The said Chief of the Bureau of Mines so appointed shall, before entering upon the duties of his office, take and subscribe to the oath of office prescribed by the Constitution, the same to be filed in the office of the Secretary of the Commonwealth, and give to the Commonwealth a bond in the penal sum of ten thousand dollars, with surety to be approved by the Governor and Secretary of Internal Affairs, conditioned for the faithful discharge of the duties of his office.

Section 4. It shall be the duty of the Chief of the Bureau to devote the whole of his time to the duties of his office, and to see that the mining laws of this State are faithfully executed; and for this purpose he is hereby invested with the same power and authority as the mine inspectors to enter, inspect and examine any mine or colliery within the State, and the works and machinery connected therewith, and to give such aid and instruction to the mine inspectors from time to time as he may deem best calculated to protect the health and promote the safety of all persons employed in and about the mines, and the said Chief of the Bureau of Mines shall have the power to suspend any mine inspector for any neglect of duty, but such suspended mine inspector shall have the right to appeal to the Secretary of Internal Affairs, who shall be empowered to approve of such suspension or restore such suspended mine inspector to duty, after investigating the causes which led to such suspension. Should the Chief of the Bureau of Mines receive information by petition, signed by ten or more miners, or one or more operators, setting forth that any of the mine inspectors are neglectful of their duty, or are incompetent to perform the duties of their

office, or are guilty of malfeasance in office, he shall at once investigate the matter, and if he shall be satisfied that the charge or charges are well founded, he shall then petition the court of common pleas, or the judge in chambers, in any county within or partly within the inspection district of the said mine inspector; which court, upon receipt of said petition and a report of the character of the charges and testimony produced, shall at once issue a citation in the name of the Commonwealth to the said inspector, to appear on not less than fifteen days' notice, on a fixed day before said court, at which time the court shall proceed to inquire into the allegations of the petitioners, and may require the attendance of such witnesses on the subpoena issued and served by the proper officer or officers, as the judge of the court and the Chief of said Bureau may deem necessary in the case; the inspector under investigation shall also have similar power and authority to compel the attendance of witnesses in his behalf. If the court shall find by said investigation that the said mine inspector is guilty of neglecting his official duties, or is incompetent to perform the duties of his office, or is guilty of malfeasance in office, the said court shall certify the same to the Governor, who shall declare the office vacant, and shall proceed to supply the vacancy as provided for by the mining laws of this State. The cost of said investigation shall, if the charges are sustained, be imposed upon the mine inspector, but if the charges are not sustained the cost shall be paid out of the State Treasury, upon voucher or vouchers duly certified as to correctness by the judge or proper officer of the court where such proceedings are held. To enable the said Chief of the Bureau of Mines to conduct more effectually his examinations and investigations of the charges and complaints which may be made by petitioners against any of the mine inspectors as herein provided, he shall have power to administer oaths and take affidavits and depositions in form and manner provided by law: Provided however, That nothing in this section shall be construed as to repeal section thirteen of article two of the act of Assembly approved the second day of June, Anno Domini one thousand eight hundred and ninety-one, entitled "An act to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith," and also articles thirteen and fourteen of an act of Assembly approved the fifteenth day of May, Anno Domini one thousand eight hundred and ninety-three, entitled "An act relating to bituminous coal mines, and providing for the lives, health, safety and welfare of persons employed therein."

Section 5. It shall be the duty of the Chief of the Bureau of Mines to take charge of and preserve in his office the annual reports of the mine inspectors, and transmit a copy of them, together with



such other statistical data compiled therefrom and other matter relating to the work of the Bureau as may be of public interest, properly addressed to the Secretary of Internal Affairs for transmission to the Governor and the General Assembly of this Commonwealth, on or before the first day of March in each year. It shall also be the duty of the Chief of the Bureau of Mines to see that said reports, or copy of them, are placed in the hands of the Public Printer for publication at the same date; the same to be published under direction of the Secretary of Internal Affairs as other reports of his Department are now required by law to be published, and in order that the Chief of said Bureau may be able to prepare, compile and transmit his annual report to the Secretary of Internal Affairs within the time herein specified, the mine inspectors are hereby required to deliver their annual reports to the Secretary of Internal Affairs on or before the fifteenth day of February in each year. In addition to the annual reports herein required of the mine inspectors, the said mine inspectors shall furnish the Chief of the Bureau of Mines, monthly and also such special reports or information on any subject regarding mine accidents or other matters pertaining to mining interests, or the safety of persons employed in mines as he at any time may require or may deem necessary in the proper and lawful discharge of his official duties. The Chief of the Bureau of Mines shall also establish as far as may be practicable a uniform style and size of blanks for the annual, monthly and special reports of the mine inspectors, and prescribe the form and character of subject matter to be embraced in the text and the tabulated statements of their reports. The Chief of the Bureau of Mines is hereby authorized to make such examinations and investigations as may enable him to report upon the various systems of coal mining practiced in the State, method of mining, ventilation, machinery employed, structure and character of the several coal seams operated, and of the associated strata, the circumstances and responsibility of mine accidents, economy of coal production, coal waste, area and exhaustion of coal territory, and such other matters as may pertain to the general welfare of coal miners and others connected with coal mining, and the interests of coal mine owners and operators in this Commonwealth.

Section 6. The Chief of the Bureau of Mines shall keep in his office a journal or record of all examinations made and work done under his administration, and copies of all official communications, and is hereby authorized to procure such books, instruments and chemical or other tests as may be found necessary to the proper discharge of his duties under this act, at the expense of the State. All instruments, plans, books and records pertaining to the office shall be the property of the State, and shall be delivered to his successor in office.



Section 7. The Chief of the Bureau of Mines shall at all times be accountable to the Secretary of Internal Affairs for the faithful discharge of the duties imposed upon him by law, and the administration of his office and the rules and regulations pertaining to said Bureau shall be subject to the approval of the Secretary of Internal Affairs, who is hereby empowered to appoint an assistant to the Chief of the Bureau, at a salary of fourteen hundred dollars per annum, and a messenger at a salary of three hundred dollars per annum: And provided further, That the salaries of the Chief of the Bureau of Mines, his assistant and the messenger, shall be paid out of the State Treasury in the manner as other employes of the Department of Internal Affairs are now paid. Provided, That the Chief of said Bureau of Mines may be removed or suspended at any time by the Secretary of Internal Affairs, when in the opinion of said Secretary there has been a neglect of duty or a failure to comply with the law, or the instructions of the Secretary of Internal Affairs.

Section 8. No person who is acting as a land agent, or as manager, viewer or agent of any mine or colliery, or who is interested in operating any mine or colliery, shall at the same time serve as Chief of the Bureau of Mines under the provisions of this act.

Section 9. That the mine inspectors of each district of this State shall, within six months after the final passage and approval of this act, deposit in the Bureau of Mines an accurate map or plan of such coal mine, which may be on tracing muslin or sun print, drawn to a prescribed scale; which map or plan shall show the actual location of all openings, excavations, shafts, tunnels, slopes, planes, main headings, cross headings, and rooms or working places in each strata operated; pump, fans or other ventilation apparatus, the entire course and direction of air currents, the relation and proximity of the workings of such coal mines to all other adjoining mines or coal lands, and the relative elevation of all tunnels and headings, and of the face of working places near to or approaching boundary lines or adjacent mines; and on or before the close of each calendar year transmit to the Chief of the Bureau of Mines a supplemental map or plan showing all excavations, changes and additions made to the map or plan. All such maps or plans to be and remain in the possession of the Bureau of Mines during the year, drawn to the scale as the first map or plan of the Bureau of Mines as a part of the records of that office.

Section 10. All acts or parts of acts inconsistent with this act be and the same are hereby repealed.

Approved—The 15th day of July, A. D. 1897.

DANIEL H. HASTINGS.

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# REPORT

OF THE

# BUREAU OF MINES.

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## INTRODUCTION.

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The year 1901 has been the most prosperous for all concerned in the mining of coal of any year for the last quarter of a century. The coal was in great demand and brought a fair price, which enabled the operators to pay their employes fair wages during the year, and to give them steadier employment than they have had for a number of years. The production of anthracite coal was 59,905,951 tons; the bituminous mines produced 80,914,236 tons; an increase for the former over the previous year, of 8,688,633 tons, the increase for the latter was only 1,595,874 tons. The production of both was 140,820,187 tons, an increase over the previous year of 10,284,507 tons in the total production.

In my opinion the daily production of the anthracite mines has reached its maximum, the average quantity handled per day worked by breakers during the past year having been about 308,000 tons, which is somewhat less than that of the year 1898, when it was 312,000 tons.

If there should be a greater demand for anthracite coal it must be met by working a greater number of days. The average number of days worked during the past year was 194.5, an increase of 23.5 days over the previous year. If the average had been 240 days, I think the mines could have produced about 72,000,000 tons.

The bituminous mines worked an average of 216.25 days during the past year, a decrease of 2.75 days from the previous year.

The production of bituminous coal depends on the consumption in

this and other countries, as the supply is practically unlimited and can be made equal to the demand.

The increase of production in the anthracite mines would have been much greater had not the disastrous rain storms during the year caused the drowning out of so many of the mines, and in addition to this, the trade experienced a shortage of cars when the coal was in the greatest demand. The production of bituminous coal also would have been considerably increased had the railroads been able to supply the mines with a sufficient number of cars.

In the production of this vast quantity of anthracite coal, 513 persons lost their lives, and 1,245 were more or less severely injured; thus the accidents were increased over the previous year 102 and 108 respectively.

In the production of bituminous coal 301 persons lost their lives and 659 were injured, an increase for the year of 39 in the fatal and 64 in the non-fatal accidents. The number of wives made widows by these fatalities in the anthracite and bituminous mines were 184 and the orphans numbered 412.

Of the 513 fatal accidents in and about the anthracite mines, 435 or about 85 per cent. occurred inside of the mines, and 78 or 15 per cent. on the surface; and of this number 346, or about 80 per cent. of the victims inside were miners and their laborers, who number 64,072 or 65 per cent. of the inside employees.

Of the fatal accidents that occurred in and about the bituminous mines 290 or 96.34 per cent. were underground, and 11 or 3.66 per cent. on the surface; 72 per cent. of this number were miners or their helpers.

To my mind, the occupation of the miner and his laborer, or his helper, can be classed as extra hazardous, as is that of locomotive engineers, firemen and brakemen, consequently these people should be especially well paid for their laborious and dangerous calling.

A large number of the non-fatal accidents were not of a serious nature, yet hundreds of them caused the fracture of limbs, whereby a large number of victims were maimed for life, others being unable to follow their usual occupations in the mines, are forced to go into the breakers to earn sufficient money to keep soul and body together.

By comparing the reports of the Anthracite Inspectors, it can be seen that they show nearly the same percentage of fatalities in proportion to the number employed, while it is quite different in the bituminous districts, as several of them have very few accidents, and some of them will compare favorably with any inspection districts in this or any other country.

The chief causes of fatalities inside of the mines range in the following order: Falls, cars, powder and blasts, explosions of fire damp, falling into shafts and slopes, etc. In the anthracite mines 226 per-

sons or 51.25 per cent. lost their lives by "falls;" 69 or 15.62 per cent. by "cars;" 51 or 11.56 per cent. by "powder and blasts;" 33 or 7.48 per cent. by "explosions of gas;" and 24 or 5.44 per cent. by falling into "shafts, slopes, etc;" while in the bituminous mines 188 persons, or 64.82 per cent. lost their lives by "falls;" 48 or 16.55 per cent. by "cars;" 8 or 2.75 per cent. by "powder and blasts;" 28 or 9.65 per cent. by "explosions of gas, etc."

From these figures it may be seen that the fatalities from "falls" are in nearly the same proportion in the anthracite and bituminous mines, while those from other causes vary considerably.

The consumption of explosives was 38,020,100 pounds, or 19,010 tons of black powder and 4,155,685 pounds, or 2,077 tons of dynamite in the anthracite mines, while only 7,851,500 pounds of black powder and 693,801 pounds of dynamite were consumed in the bituminous mines. This fact alone is the reason for the greater number of fatalities by explosives in the hard coal mines.

For each pound of explosives 1.42 tons of coal were produced in the anthracite mines; while in the bituminous, each pound of powder loosened 9.46 tons.

Electricity is one cause of fatalities in the bituminous mines (seven having lost their lives through it during 1901), that so far has not proved fatal to any person in the anthracite mines. Electricity in various forms has been the cause of many deaths in the soft coal mines, either from the men coming in contact with the electric trolley wire, or with the electric wire that carries the power to the electric cutting machines. In my opinion, separate traveling ways should be provided for the workmen when the haulage is done by electricity, unless the wires can be raised to a distance of at least six feet from the rail, and even then there should be sufficient room for passing on the main haulage roads at all points as men cannot always reach the "safety holes" in time. In every case where electric machines are used for cutting coal, the wires should be made absolutely safe, as men in the hurry of their work forget about the "deadly wire," touch it, and all is over, and the report follows "killed by an electric shock." Humanity demands protection for the workmen from this most deadly agent recently introduced and employed in coal mines. I hope the time will come when "compressed air," "liquid air," or some other agent will supplant electricity in coal mines, but this will not take place until the necessary power can be generated as cheaply as by electricity.

In gaseous mines, electric cutting machines or electric motors should never be permitted in use, as otherwise sooner or later they will be the cause of a great catastrophe.

The number of employes in and about the anthracite mines was



147,651, an increase of 3,925 over the previous year, 98,434 of these were employed inside, and 49,217 outside of the mines.

The number of persons employed in and about the bituminous mines was 117,602, an increase of 85.84 over the previous year; of these, 95,562 were employed inside and 22,040 on the surface.

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### INSPECTIONS OF MINES DURING THE YEAR 1901.

The mines were systematically and regularly inspected, and as frequently as the other duties of the inspectors would permit. Every fatal and serious accident was inquired into, which of itself takes up a great deal of time, as also does attending inquests, attending court on cases in connection with their duties, and the office work also took considerable time; yet I find that the Anthracite Inspectors made 1,350 mine inspections and the Bituminous Inspectors 2,140. The inspections were made as frequently as the conditions of the mines required; some having been inspected frequently, about once each month, while others were inspected only two or three times during the year, and a few of the mines but once.

The inspectors report the mines generally in good condition as to ventilation, drainage, etc., as could be expected. They all report some exceptions, but the mines that are not up to the standard are old mines that are being "robbed" preparatory to being abandoned, and small operations that do not generate explosive gas.

I am satisfied with the general work of the inspectors, yet there are a few of them who are not doing their work to my satisfaction. I have hopes of their improvement during the coming year; however, I may have to take measures provided by law, in an effort to better the service.

## RECAPITULATION.

Giving the total number tons of coal mined, shipped, etc., number of days worked, number of employes, number of persons killed and injured, number kegs of powder and pounds of dynamite used, in the Anthracite districts of Pennsylvania, for the year ending December 31, 1901.

Districts.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at collieries.	Number of tons sold to local trade and used by employes.	Total production of coal in tons.	Average number of days worked.	Number of persons employed.	Number of fatal accidents.	Number of non-fatal accidents.	Number of kegs of powder used.	Number pounds of dynamite used.	Number of horses and mules in use.
First.	1,147,960	519,898	100,163	1,767,911	198	18,772	78	118	292,180	214,979	1,852
Second.	1,088,291	455,922	206,435	1,750,708	174	18,422	62	186	298,729	119,099	2,014
Third.	6,131,191	475,222	147,665	6,754,078	179	17,651	81	177	298,360	293,036	2,272
Fourth.	8,810,681	760,431	289,443	9,860,555	191	21,317	78	222	356,236	482,621	2,895
Fifth.	5,529,157	758,056	137,761	6,351,969	223	16,108	69	80	120,616	1,012,871	1,700
Sixth.	6,197,577	995,250	100,003	8,188,829	197	2,377	73	144	102,622	644,876	2,002
Seventh.	6,145,409	772,103	137,623	7,055,135	206	29,814	62	97	126,477	666,191	2,051
Eighth.	4,206,465	672,757	79,328	5,158,550	188	12,655	37	116	71,752	63,737	1,351
Total.	52,117,962	5,270,627	1,178,671	79,866,961	194½	147,651	513	1,241	1,520,894	4,155,675	16,079

## RECAPITULATION—Continued.

Districts.	Number of Boilers.			Locomotives.			Total horse power.	Number of steam engines of all classes.			Total horse power.	Number of pumps delivering water to surface.	Capacity in gallons per minute.	Quantity in gallons delivered to surface per minute.	Number of electric dynamos.	Number of air compressors.
	Cylindrical.	Horizontal.	Vertical.	Steam.	Air.	Electric.										
First.	377	9,026	158	27,782	39	18	27,782	39	12	437	30,637	104	72,614	49,315	16	18
Second.	262	12,738	115	28,273	35	9	28,273	35	9	437	32,786	81	52,262	31,770	9	8
Third.	184	9,420	231	34,113	41	5	34,113	41	6	507	71,325	117	86,597	51,462	11	26
Fourth.	545	22,217	245	59,385	39	4	59,385	39	8	709	86,137	92	75,876	40,832	7	30
Fifth.	846	21,000	291	39,988	107	11	39,988	107	11	594	92,031	137	155,861	85,587	13	23
Sixth.	446	16,925	345	64,496	41	11	64,496	41	11	513	50,391	124	116,963	85,477	18	18
Seventh.	206	10,487	221	38,860	36	2	38,860	36	3	413	49,546	123	105,711	80,430	8	8
Eighth.	286	7,444	277	32,135	34	1	32,135	34	1	363	36,918	60	58,945	28,362	1	9
Total.	3,397	119,557	1,332	288,021	262	51	288,021	262	40	4,133	561,822	858	785,439	453,255	66	140

Recapitulation table showing number of each class of employees inside and outside the mines of the Anthracite region for 1901, by districts.

Anthracite Districts.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.								
	Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.	Total outside.	Grand total, inside and outside.
First.	69	47	5,484	4,634	1,966	408	1,562	14,170	59	222	411	1,951	74	1,876	4,601	18,773
Second.	60	95	4,459	3,659	1,854	429	1,557	13,141	48	228	363	2,115	104	2,024	4,852	18,423
Third.	78	90	4,572	3,662	1,906	428	1,567	12,803	43	263	495	2,142	103	2,003	5,351	17,654
Fourth.	63	164	5,770	5,156	1,869	909	3,093	16,894	42	304	671	3,258	106	3,137	7,453	24,317
Fifth.	73	49	3,670	2,572	829	240	1,965	9,768	44	360	685	2,131	123	2,052	6,740	16,108
Sixth.	64	136	4,787	2,529	931	276	3,379	12,102	63	300	750	3,618	116	3,228	8,115	20,277
Seventh.	82	140	5,704	2,017	1,040	287	3,486	12,716	48	302	653	2,603	91	3,461	7,128	19,834
Eighth.	70	109	3,268	1,269	1,529	171	2,934	7,740	52	232	547	1,716	85	2,283	4,915	12,635
Total.	529	830	37,894	26,298	10,894	3,148	18,951	98,431	379	2,331	4,615	19,564	804	21,524	49,217	147,651





Table showing causes of non-fatal accidents and number attributable to each cause that occurred in and about the Anthracite mines for the year 1901.

	1st District.		2d District.		3d District.		4th District.		5th District.		6th District.		7th District.		8th District.		Total.		Percentage.	
	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.
Causes of Accidents.																				
By falls of coal, slate and roof, .....	28	.....	68	.....	48	.....	113	.....	28	.....	48	.....	30	.....	31	.....	297	.....	36.59	.....
By mine cars and machinery, .....	21	8	41	15	33	9	49	22	11	48	11	9	14	7	19	5	212	63	19.43	61.18
By explosion of gas and dust, .....	18	.....	14	.....	20	.....	51	.....	4	33	.....	.....	9	.....	21	.....	180	.....	16.49	.....
By explosions, powder, blasts, etc., .....	12	.....	50	.....	26	.....	24	.....	11	22	.....	.....	17	.....	13	.....	145	.....	13.29	.....
By falling into shafts, slopes, etc., .....	1	.....	.....	.....	9	1	16	.....	2	4	.....	.....	3	.....	4	.....	13	.....	1.19	.....
By mules, .....	6	4	16	7	13	4	47	10	1	.....	.....	.....	2	.....	3	1	32	4	2.83	2.63
Miscellaneous causes, .....	.....	.....	.....	.....	.....	.....	.....	.....	6	8	5	12	7	6	12	4	112	55	10.27	36.18
Total, .....	116	12	162	21	159	14	290	32	63	56	123	21	82	13	106	10	1,091	152	100	100

## ACCIDENTS FROM FALLS.

Accidents from falls of coal, of roof and sides, have always been very numerous in the mines of this State, and the same can be said of other states, and of almost all the countries where coal has been and is being mined, but in a somewhat lesser degree, and it is possible that "falls" will always continue to be the chief cause of accidents in coal mines.

After stating the above facts the momentous question is, can the number of these accidents be reduced? I answer emphatically, Yes; but the only way that it can be reduced is by eternal vigilance on the part of miners, foremen and superintendents. The superintendents can aid, by formulating a series of rules for systematic propping; the foreman, by seeing that the rules are strictly obeyed; the miners, by complying with all rules, and also by setting props when needed even if the rules are not specific on all points. When rules are made for systematic propping, the Inspector when making his inspections can see whether the rules are being violated. Systematic propping has been the theme of the Inspectors in all the years from 1870 to date.

I remember well that Mine Inspector T. M. Williams asserted in 1870, that if he had the authority he would enforce an arbitrary rule that all miners in breasts should put up props every six feet, whether the roof was good or bad, and that when the roof was bad they should stand as close as needed. I remember also that the miners and superintendents, myself amongst the number, thought that the Inspector was very unreasonable. The superintendents were against it as it would take too much timber, which would add to the cost; the miners were against it as it entailed too much extra labor. Neither superintendents or miners should be listened to, as human life is more valuable than the extra cost of timber or the extra labor involved. If the superintendents will not adopt the rules for systematic propping, I think the Legislature should pass a compulsory law on this important subject, and add a severe penalty for non-compliance, which would alike reach the miner, the foreman and the superintendent.

During the past twenty years more than 52 per cent. of the fatal accidents have been caused by falls, but there is no reason why the number from this cause should not be reduced at least 50 per cent. If as much care were taken to guard against falls of coal, roof and sides as is being taken in regard to ventilation, to keep the mines clear of what is generally called the "deadly gas," a stringent rule should be adopted against the more deadly "falls." The number killed by gas in the anthracite mines during the past twenty years

was 663, while the number killed by falls during the same period was 3,521, and the same proportion is found in the bituminous mines, only in a lesser degree.

Rule 5, Anthracite Mine Law, is as follows: "In mines generating explosive gases, the mine foreman or his assistant shall make a careful examination every morning of all working places and traveling roads, and all other places which might endanger the safety of the workmen \* \* \* and such examination shall be made with a safety lamp \* \* \* Every report shall be recorded without delay in a book which shall be kept at the colliery for the purpose, and shall be signed by the person making the examination," and articles of like import are found in the Bituminous Law.

Article XI, Anthracite Law, Sections 1, 2 and 3, provides that "It is the duty \* \* \* of the superintendent or mine foreman \* \* \* to furnish to the miners all props \* \* \* necessary for the safe mining of coal." "Every workman in want of props \* \* \* shall notify the \* \* \* mine foreman of the fact, at least one day in advance \* \* \* and in case of danger from loose roof or sides, he shall not continue to cut or load coal until the said props \* \* \* have been properly furnished and the place made secure." "A failure to comply with the provisions of this article shall be deemed an offence against this act \* \* \*"

Similar provisions are made for the protection of the employes in the Bituminous mines, but they are somewhat more elaborate. I would suggest that an addition be made to both anthracite and bituminous laws as follows: "In all mines, the mine foreman or his assistants shall make a careful examination each day of all working places and traveling roads to see that the roof and sides are properly supported by timber or other material and to see that the rules in regard to systematic propping are faithfully carried out. Any miner who is found violating these rules or neglecting to comply with their provisions, shall be suspended. Reports of all examinations shall be recorded in a book which shall be kept at the colliery for the purpose, and it shall be the duty of the Mine Inspector to see that all such examinations are properly recorded and signed by the person making such examination, the record book to be provided by the Bureau of Mines."

An addition, or an amendment similar to the above, would, in my opinion, go a great way toward reducing the number of lives lost by "falls." Other countries, notably France, took this question up in a business like manner years ago. Great Britain being anxious to reduce the number of accidents by "fall," sent a commission of four Inspectors of Mines to look into the methods of working coal at the Courrieres Collieries, in France, and report to the Secretary of State,



on the methods of preventing "falls of roof and sides." The Commissioners report was as follows:

"The object of our visit was to see in practical operation the methods adopted by the Courrieres Collieries for guarding against accidents by falls, and to ascertain the general conditions under which the work was carried on; we were also anxious to assure ourselves that the means adopted were adequate for the result obtained (viz: the great reduction in fatal accidents by "falls" since systematic timbering had been enforced along with increased supervision), and to see to what extent the system might be applicable to British mines. The first day was devoted to underground inspection of some of the workings of the Louise seam at No. 10 of the Courrieres Concession, and to obtaining information on various matters which appeared to be important to our inquiry.

"The second day of our stay was spent in visiting two pits belonging to the Lens Colliery, at one of which we made an underground inspection.

"The Courrieres Concession has an area of about 13,000 acres; it possesses 44 seams of coal, of which a large number are being worked. The average thickness of the bituminous coal is 3 feet, 7 inches; of the semi-bituminous, 2 feet 10 inches; of the quarter-bituminous, 2 feet 8 inches \* \* \* The roof is almost invariably shale, and the floor a hard under clay \* \* Parts of the seams are flat, but a dip of 10° to 20° is not uncommon; in some places the seams are completely overturned and here the dip is as much as 50° or even 60°.

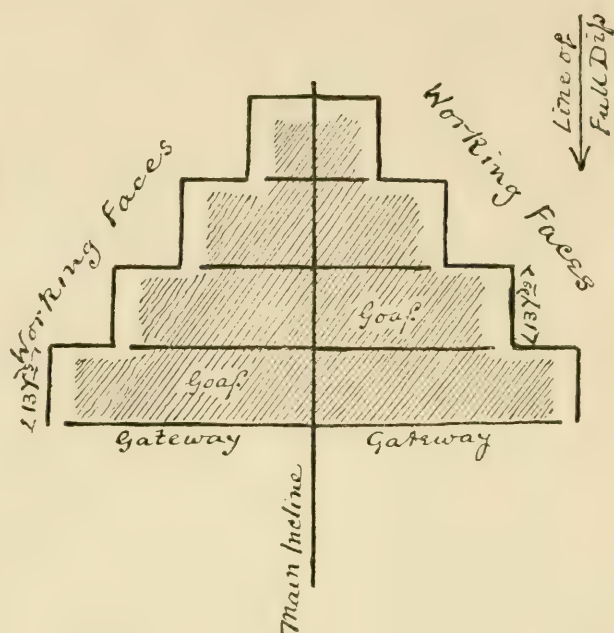
"The Courrieres Company employs 5,794 persons inside and 1,204 outside of the mines; about 42 per cent. of the outside workmen are employed in getting coal, 6 per cent. in preparatory work, and 52 per cent. in haulage and other work \* \* \* The depth of the No. 10 pit, Courrieres, is 387 yards.

"Where the seams are inclined, the two common methods of working may be regarded as kinds of "long wall" work, differing from the typical "long wall" with its straight, continuous face, by having a series of short faces arranged step fashion, each one slightly in advance of the other. These faces advance according to circumstances on the line of the strike, or to the full rise of the seam. In the former case, the faces advance on the level course to the right and left of a self-acting plane, each face being 13 yards wide, and 9 or 10 yards in advance of the face above. Each of these working places is connected with the incline by a level gate road. These gate roads are formed on the low side of each working place, and the coal is cast down the face by hand, and filled into tubs (cars) at the end of the tramroad. There are three miners in each working place.

"When the working faces advance to the rise of the seam, each face is about 17½ yards wide, and is served by a short inclined plane

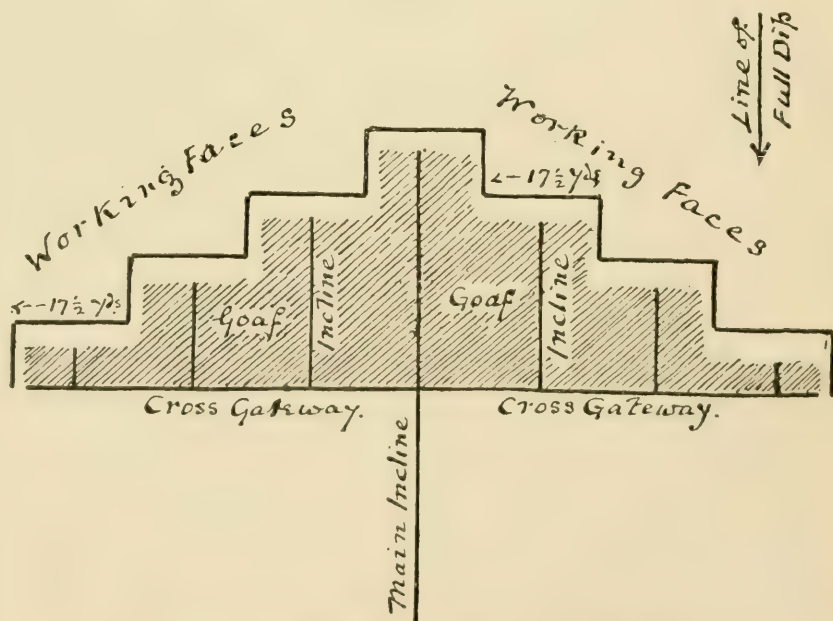


FIG 1.



Longwall in steps. Faces advancing on level course.

FIG. 2.



Longwall in steps. Faces advancing to full rise.

down which the tubs are lowered to a cross gateway along which they are taken to a main incline. The following diagrams, Figures 1 and 2, illustrate these methods of working:

"In some of the comparatively flat parts of the seams, a system of pillar work is in vogue; levels are driven about 11 yards apart, centre to centre, leaving a pillar of about  $8\frac{3}{4}$  yards between them. These pillars are worked off in portions (lifts) 13 feet wide at a time.

"The main roadways were well lined by masonry, steel or timber, and were in excellent order; here there was very little chance of anyone being injured by a fall. It is more important to consider the branch roadways and working faces, the latter especially being subject to accidents from falls of roof or side. The chief points to be considered are: Material employed, method of setting the timber, method of drawing the timber, cost of timbering, supervision and official regulations upon the subject. The kinds of timber used were pine, oak, birch, ash, cherry and hornbeam, this latter has to be used green. The branch roadways leading to the working places are made by "ripping" the roof or floor after the coal has been 'got' (mined) in the ordinary way. These roads are supported systematically by sets of timber placed 3 feet 3 inches apart \* \* light poles are laid from 'bar' to 'bar,' at intervals of 18 or 20 inches, so that there is no unsupported roof space exceeding 3 feet 3 inches by 18 or 20 inches. Similar light poles or lagging pieces are placed between the props and the side of the road if necessary. We were informed that to provide against small falls of roof where the roof is very bad, additional small pieces of wood are placed crosswise from pole to pole; during the process of "ripping" the workmen are further protected by iron bars pushed forward above the 'bar' of the last set, and made firm by a wedge at the back end. In some places there seems to be considerable pressure or crush on these roads, as they have to be maintained through the 'goaf.'

"The principle of timbering the working places, is to place 'bars' 10 to 13 feet long against the roof at intervals of 3 feet 3 inches, and support each bar by props at distances of 3 feet 3 inches from each other. Contrary to the usual practice, the bars are placed parallel to the working face and not at right angles to it. The roof between two successive 'bars' is protected by light poles stretching from 'bar' to 'bar' and about 18 or 20 inches apart. As in the case of roadways, small cross pieces of timber are laid from pole to pole when the roof is very bad \* \* Between the last 'bar' and the actual working face the roof is supported temporarily by iron bars 4 feet 3 inches long by  $1\frac{3}{8}$  inches square, the leading ends of which are flattened to a chisel edge. These are pushed forward until they almost touch the working face. When an advance of rather more than 3 feet has been accomplished under this provisional means of



support, light poles are put in, one end being supported by the last 'bar' and the other by a light temporary prop close to the coal, and the iron bars are then withdrawn. As soon as room enough along the face has been excavated for taking the full length of a fresh 'bar,' no time is lost in putting it in under the forward end of the poles, and supporting it by the usual props; the temporary props used as provisional supports for the light poles are then taken out. The result is that as the men work this face forward, there is no space of roof unsupported, exceeding 3 feet 3 inches by 20 inches.

"The Louise seam, where we saw the system of timbering in operation, consisted of 20 inches of top coal, then 24 inches of hard clay and 28 inches of bottom coal, and it was dipping at an angle of 30°, and the depth from the surface was about 300 yards. The working places we inspected were in a part of the mine where the seams are completely overturned; the actual roof being formed by the under-clay containing many slippery joints or 'backs' and occasional pot-holes. The miner is paid by the ton of coal raised, and the price he receives includes packing the rubbish behind him, and all the work of timbering. His output is about 3 tons 4 cwt. of coal per shift. The coal is 'got' by pick and not blasted, consequently there is no fear of the timber close to the face being knocked out by shots \* \*

"In the workings we inspected, the goaf was packed full, some of the material required being brought from other parts of the mine, and none of the timber withdrawn. We were informed that it was left because it did not pay to 'draw' it and not for reasons of safety. The general practice is to stow the goaf completely full and leave the timber in, except in seams which are comparatively flat and over 4 feet in thickness. In the latter case the timber is recovered so far as is consistent with safety. Rather more than two-thirds of the total output of coal is got from workings where the goaf is fully stowed and the timber left in \* \*. When the timber is 'drawn' the work is done by special workmen who are provided with three special tools in addition to a sledge. The first (Figs. 3 and 4) has a hammer head about 9½ inches long, one end for striking and the other pointed for sticking into pieces of timber; the top is serrated so as to grip a prop firmly when it is employed to shove it out. The second (Fig. 5) with two pointed prongs.

"The third a cutting chisel which is for cutting the edge of the hollow of the 'post' in which the 'bar' rests in cases where the 'post' rests where the 'post' cannot be knocked out. (Figs. 6 and 7.)

"A is the cutting edge of the chisel and B the butt end which is struck with a sledge. The tools are made entirely of iron or steel and are 8 feet long.

"As might be expected from the account just given, the cost of tim-

FIG. 3.

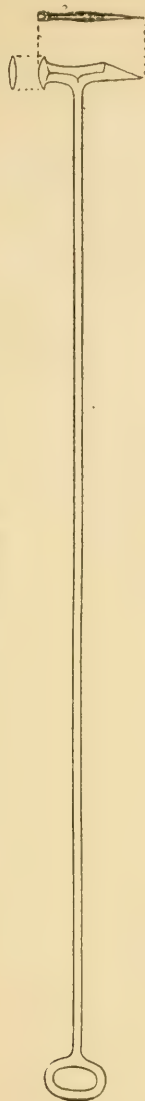


FIG. 4.\*

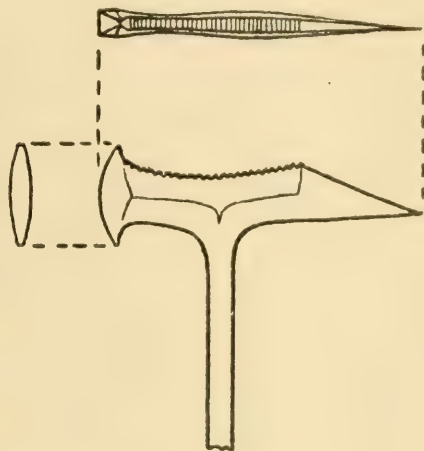


FIG. 5.

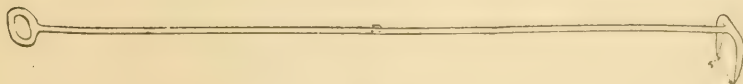
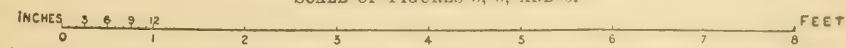


FIG. 6.



SCALE OF FIGURES 3, 5, AND 6.



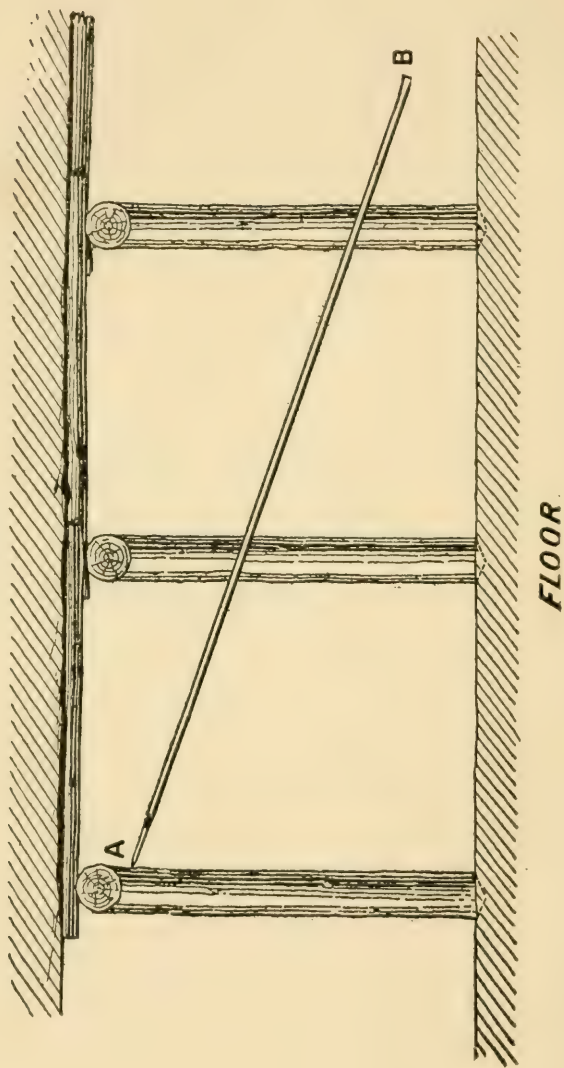
\* The scale of Fig. 4 is three times as large as that of Figs. 3, 5, and 6.







FIG. 7.  
*ROOF.*



bering is high, the average cost at the Courrieres, irrespective of the cost of setting (which as already stated is included in the tonnage price) is about 18 cents per ton of coal. As steel sleepers are used, the timber bill has to be paid solely for the purpose of support \* \* The main point requiring attention and the one which in the opinion of the Courrieres engineers most largely conduces to the prevention of accidents, is that supports must be put in as soon as there is room, and under no pretext may the timbering be delayed 'until a more convenient season,' as is often the case in British collieries. We learned from M. Fevre, the Government Inspector of Mines, that systematic timbering is practically universal in the collieries of northern France, and indeed in French collieries generally. With reference to the temporary iron bars, such as are used at Courrieres, we found that the use of temporary supports in advance of the permanent timbering is not confined to the Courrieres Collieries, as we had the opportunity of seeing at one of the collieries belonging to the Lens Company, small steel girders in general use for precisely the same purpose; these light and handy steel girders are a great improvement on the square iron bars. M. Reumaux, the Director General of the Lens Company and one of the foremost engineers of France, has kindly supplied an account which we have translated, and which with his permission we reproduce. It is important in reading M. Reumaux' conclusions to know that the Lens Company is the second largest in France, employing more than 11,000 persons \* \* his opinion, therefore, must be entitled to great consideration, and when he tells us that accidents from falls of roof have diminished by one-half where the small steel girders (corresponding to the iron bars at Courrieres) have been introduced, and that he proposes gradually to enforce their use throughout his collieries, it would be difficult to obtain stronger testimony in their favor."

The conclusions that this learned commission arrived at are as follows:

"(1). The diagrams printed \* \* fairly represent the timbering as it is done day by day at the Courrieres, under the worst roofs \* \*

"(2). The system of supporting the roof at the Courrieres Collieries may be divided into two parts, viz:

"(a). Systematic timbering with the timber inserted as soon as there is room for it.

"(b). The use of temporary iron bars to support the roof in advance of the last 'setting' of timber until there is room for another 'setting.'

"(3). The immunity from accidents at Courrieres is not by any means due to naturally favorable conditions of the roof, but results chiefly from the extreme care taken of it. The Courrieres roof which we saw was certainly not good, and the great degree of safety at

tained is the strongest possible argument in favor of 'systematic timbering.'

"(4). We agree with the emphatic opinions expressed by the French engineers as to the necessity of enforcing, not only systematic timbering but also the setting of the timber immediately when the distance fixed by regulations has been attained.

"(5). We are distinctly of the opinion that more supports are fixed at the Courrieres to support the roof than is generally the case at home. Excellent timbering may of course be seen at home, but the important difference is that at the Courrieres the roof is regularly and at all times 'close timbered;' while in this country under similar roofs, the timbering is generally left to the discretion of the workmen, and is seldom so close, and is rarely fixed as soon as possible. It is only by adopting and enforcing some regular system of propping, that it is possible to insure the necessary supports being put in without dangerous delay."

This method of timbering can be adopted with slight modifications in all coal mines, especially in the bituminous mines of this State where the coal is being mined by pick, and with a little more modification can be adopted where coal is mined by machines. While it cannot be adopted in the very thick and heavy pitching anthracite seams, with some modifications it can be used with success in the low anthracite seams. The great loss of life from "falls" demands some remedy at once, as it is plain that the present system has been a failure. Our American Mining Engineers can inaugurate a system suitable to meet all conditions in the anthracite and bituminous mines, and neither expense nor labor should be allowed to interfere.

It can be seen by consulting the following tables of comparison that the loss of life by "falls" during the five years, 1895-1900, has been lower in the Courrieres Collieries than in France generally, or in Great Britain, Prussia, Illinois, Pennsylvania; bituminous and anthracite. The Courrieres had only 0.126 deaths by "falls" per 1,000 employed inside, while in the bituminous mines of this State the death rate from "falls" was 1.34 per 1,000 employed inside, and in the anthracite mines the loss was still greater, being 1.50 deaths per 1,000 employed inside. I cannot expect that the loss of life from "falls" can be reduced in either the anthracite or bituminous mines of this State, to the degree that it has been in France, viz: 0.58 deaths per 1,000 employed inside, until some radical change is adopted in the method of securing the roof and sides, and even then there must be daily supervision by competent foremen or assistants.

Comparative table showing the death rate from falls of roof and sides in the United Kingdom per 1,000 persons employed in coal mines from 1895 to 1899 inclusive.

Years.	Inspection Districts by Numbers and Names.													Average for United Kingdom.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	
	East Scotland.	West Scotland.	New Castle.	Durham.	Yorkshire and Lincolnshire.	Manchester.	Ireland.	Liverpool.	Midland.	North Staffordshire.	South Staffordshire.	South Western.	South Wales.	
1895.	.89	.70	.46	.66	.54	.97	.....	.97	.33	.84	1.37	.89	1.08	.75
1896.	.80	.98	.66	.55	.54	.78	.....	1.05	.51	.99	1.05	.78	1.01	.78
1897.	1.00	.97	.82	.83	.71	.90	.....	1.07	.51	.74	.78	1.01	1.17	.88
1898.	.66	1.09	.98	.79	.68	1.29	1.40	1.19	.81	.89	.73	.61	.73	.76
1899.	.81	.64	.65	.91	.48	.90	2.73	.82	.62	.79	.84	.63	.88	.75
Total.	.83	.88	.59	.75	.59	.96	*.82	1.02	.52	.85	.94	.78	.97	.78

\*Coal mining in Ireland is on a small scale.



Comparative table showing the death rate by falls of roof, coal and sides per 1,000 persons employed in the coal mines of Pennsylvania in each inspection district, from 1895 to 1899 inclusive.

Years.	Anthracite Districts.								
	First.	Second.	Thrd.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Average.
1895, .....	1.35	1.41	1.73	1.34	1.30	1.21	1.34	1.06	1.34
1896, .....	1.99	1.28	*5.71	.96	1.02	1.19	1.53	.90	1.82
1897, .....	2.10	1.50	1.22	1.13	.53	1.57	1.83	.81	1.34
1898, .....	1.90	1.20	1.72	1.41	1.64	1.24	1.56	.69	1.42
1899, .....	2.62	1.68	2.15	1.69	1.26	1.25	1.08	1.02	1.59
Total, .....	1.99	1.42	2.51	1.31	1.05	1.29	1.48	.90	1.50

\*Caused by Twin Shaft disaster, in which 58 persons were buried by a fall of roof.

Years.	Bituminous Districts.										
	First.	Second.	Third	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.	Ninth.	Tenth.	Average.
1895, .....	1.80	1.87	.64	1.16	.48	.56	1.22	1.23	1.52	.78	1.13
1896, .....	2.99	1.63	.50	1.24	1.18	1.37	1.32	.69	1.20	0.00	1.21
1897, .....	1.50	1.22	.98	.62	1.96	.77	2.01	.48	1.87	1.09	1.25
1898, .....	2.88	1.28	.46	1.10	.86	1.24	1.55	1.03	2.82	1.41	1.46
1899, .....	3.44	1.55	.48	1.55	1.91	1.12	2.62	1.30	1.85	1.38	1.72
Total, ....	2.52	1.51	.61	1.13	1.24	1.01	1.74	.95	1.84	.93	1.35

Comparative table showing the death rate from falls of coal, roof and sides per 1,000 employes inside the coal mines in the following counties and States from 1895 to 1899 inclusive.

Years.	Ratio Killed per 1,000 Employed.						
	Collieries, France.	France	United Kingdom, Eng- land, Scotland, Wales, Ireland.	Prussia.	State of Illinois.	Bituminous mines in Pennsylvania.	Anthracite mines in Pennsylvania.
1895, .....	.13	.53	.75	1.28	1.10	1.13	1.34
1896, .....	.13	.54	.75	1.15	1.24	1.21	1.82
1897, .....	.13	.66	.75	1.08	1.52	1.25	1.34
1898, .....	.18	.70	.75	1.29	1.36	1.46	1.42
1899, .....	.18	.67	.75	1.29	1.54	1.72	1.59
Average, .....	.126	.58	.78	1.22	1.34	1.35	1.50

NOTE ON THE EMPLOYMENT OF IRON BARS BY M. REMAUX.  
DIRECTOR GENERAL OF THE LENS COLLIERIES, FRANCE.

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After many years of trial in different kinds of ground, and under different conditions, we have adopted and rendered compulsory at No. 6 Pit, the employment of iron bars in driving roadways and in getting coal. The iron bars which we use in the working places are formed of double T iron about 4 feet long as is shown in the sketch marked (Fig. 1).

The front edge is made by heating that end of the bar and flattening it with a hammer until the two flanges are welded together as seen in Fig. 1. The bar weighs about 11 pounds; in other words it is handy and the cost would equal about forty cents American money.

The manner in which a working place is timbered is as follows:

We will take the time when a workman is about to excavate coal; we shall see that along the working face immediately under the roof there are a series of timber "bars" each supported by three upright props; the timber "bars" are 8 feet 2 inches long and should overlap sufficiently so that the last A for instance, should be in the same plane at right angles to face, as the last bar B of the preceding set (Fig. 2).

The workman begins to cut away the coal under the roof in front of him, and would therefore soon find himself underground without support were it not for the iron bar. As soon as he has uncovered one foot of roof he pushes his iron bar between the roof and the last wooden bar which has been put up, but in order to do this he must have left room for the iron bar to pass, and we have therefore been obliged to require that above each prop supporting the timber bar the workman should put in a big wooden wedge, as he would have to do in any case in order to tighten up the timber bar properly (Fig. 3).

From this figure a first reason for the chisel-like end of the iron bar will become apparent. It is evident that if it did not exist the bar would not bear fully against the roof in the first part of the process of excavation; it is with this object that the workman places the iron bar with the web vertical, and the flattened end upwards. As soon as part of the roof has been uncovered by the removal of the coal, the workman should push on the iron bar and fix it against the roof by means of wedge K, and we usually require that the edge of the bar shall not be more than eight inches from the face. The workman is provided with three iron bars which he drives out in front

FIG. 1.

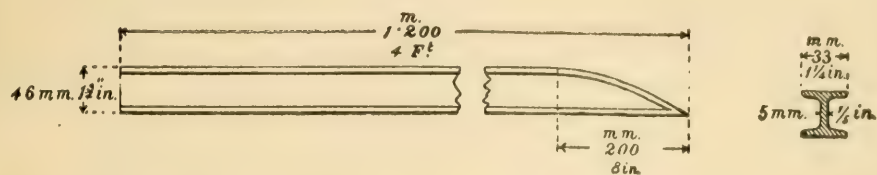


FIG. 2.

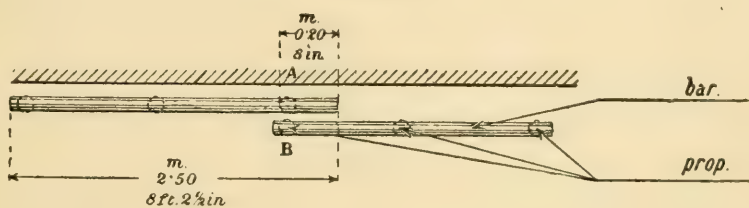


FIG. 3.

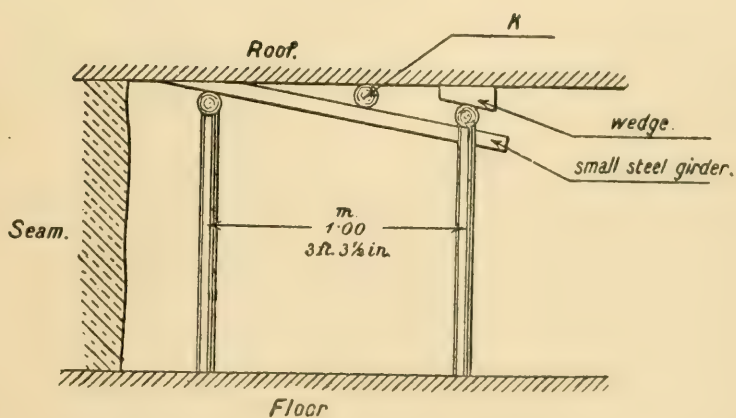








Fig. 4.

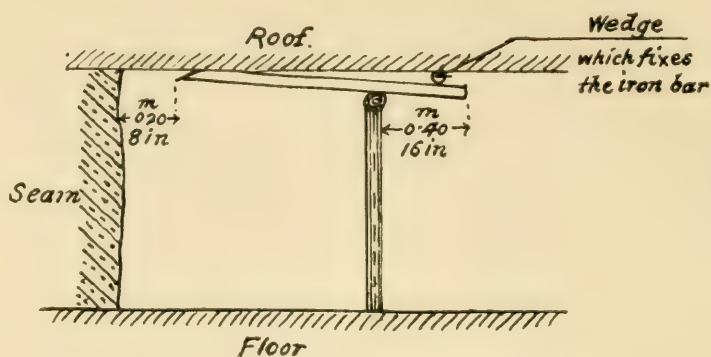


Fig 5.

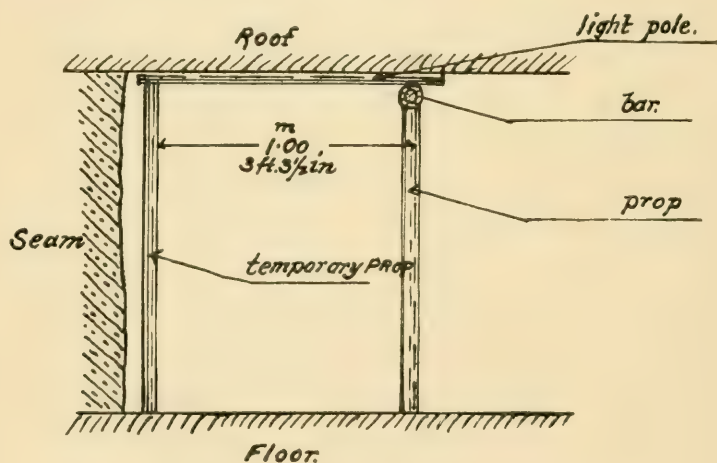
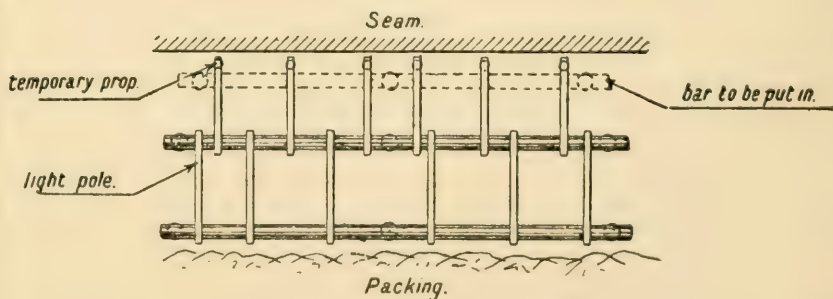


FIG. 6.



of him at a distance of 20 inches from one another. When he has excavated 3 feet  $3\frac{1}{2}$  inches, the iron bars still have 16 inches projecting behind the timber bar, and will be firmly fixed against the roof by the wedge (Fig. 4).

The workman now passes a light pole by the side of the iron bar, pushes it on to the face of the coal and supports it by a temporary prop (Fig. 5).

He does the same by the side of his other two iron bars, and then withdraws all three, and moves sideways in order to continue his work of excavation, consequently when his work is finished, he has behind him a timber bar over which has been passed six light poles held up by six temporary props (Fig. 6).

Then he goes and brings a timber bar and after having firmly supported it by the three regulation props, he takes down the six temporary props; he will therefore have completed his excavation without having once been under any unsupported roof.

We may here remark that fixing the length of the iron bar at 3 feet  $11\frac{1}{4}$  inches is justified by the reason given; that is to say, that there is always a heel or butt end of 16 inches for fixing it firmly, and that the chisel edge is useful not only for supporting the first few inches of roof which have been laid bare, but also for enabling the iron bar 3 feet  $11\frac{1}{4}$  inches in length, to be put in and drawn out easily between the two rows of props of parallel timber bars 3 feet  $3\frac{1}{2}$  inches apart.

The description given is of purely diagrammatic character and has simply for its object to explain the principle on which the irons are employed; but this system lends itself with elasticity to all the applications required at the working faces, whether they advance to the full rise or along the level course, and whether the ground be good, bad or indifferent.

When making a roadway by cutting away (ripping) the roof after the excavation of the coal, we likewise employ iron bars. The workmen, called "brushers" have three square iron bars  $1\frac{1}{2}$  inches on the side; they are very heavy and we propose to replace them by iron bars of the same kind as those employed in "getting" (mining); the only difference will be their length. Experience has shown us that the iron bars employed by the brushers should be 5 feet long. After the shot has been fired, the manner of using them is precisely the same as before. The brusher passes his three iron bars over the last timber bar and pushes them on in proportion as he beaks down the ground, and in such manner that he is always protected \* \* \*

Results: The experience of several years has proved that the employment of iron bars has reduced in very notable proportions the accidents from falls of roof or side in the working places. The reduction in the number of persons injured from this cause is certainly more than 50 per cent.



## EXTRACTS FROM THE OFFICIAL REGULATION FOR THE COURRIERES COLLIERIES.

### Part III.

Getting coal and timbering the working faces; heightening the roadways (ripping) and timbering them.

### Article XIV.

Working miners employed in getting coal should, before everything pay attention to the state of the solidity of the ground, and the condition of the timbering. Before beginning their work, they must examine whether the timbering placed before their arrival has been disturbed accidentally, and before doing any other work, they must remedy anything which appears to be defective. The timbering must always be sufficiently strong and be kept as close as possible to the working face. It must follow the "getting" immediately, and must be placed for the whole height or width of the face before the workmen go away.

As it is impossible to draw up precise rules with regard to the precautions to be observed in timbering the working places, the workmen must obey implicitly all measures of safety prescribed by the foreman for this purpose \* \*

### Article XV.

In heightening the roadways (ripping) the workmen must never take out the timber supporting the roof until he has made the sides safe. The workmen who are packing the goaf shall keep inside the working faces, where the stones shall be thrown by the "Brushers," and they shall not stand under the roof which has been laid bare. The foreman for this purpose, must keep himself informed by frequent and daily visits as to the condition of all the roadways in his district; he must see that repairs are executed if there is any danger of a fall of roof or side, especially where several sets are broken one after another. He must see that the roadways are always kept sufficiently wide. \* \* He must stop the travel and cause the workmen to leave the roadways and the working faces, where the roof is \* \* \* causing anxiety. He must himself "sound" with the pick, which he must always carry, the sides of the roadways where the rock is left bare, and must at once give orders to take down or to support any parts which he finds insecure \* \* \*

\* \* \* In driving through heavy falls, none but experienced

workmen must be employed and they must protect themselves with stronger iron bars than usual. \* \* \*

It is always a miner and not a laborer who is charged with work of this kind. None but special workmen shall be employed in "drawing" timber, and instructions how to work shall be given them by the foreman; orders shall be given to sacrifice any pieces of timber which cannot be removed without endangering the safety of the workmen.

Nationality by birth of employees who were killed and fatally injured in and about the mines of the Anthracite region from 1892 to 1901 inclusive.

Years.	Americans.	English.	Welsh.	Scottish.	Irish.	Germans.	Poles.	Hungarians.	Italians.	Slavs.	Lithuanians.	Austrians.	Russians.	Greeks.	Swedes.	French.	Tyroleans.	Bohemians.
1892.....	53	33	40	2	62	18	56	42	11	6	9	3	3	2	.....	.....	.....	.....
1893.....	73	36	41	1	77	25	129	39	19	15	3	6	2	.....	.....	1	.....	.....
1894.....	76	37	43	4	76	27	91	62	16	4	1	4	1	.....	2	.....	.....	.....
1895.....	78	38	39	1	74	23	113	31	18	4	1	4	1	.....	.....	.....	.....	.....
1896.....	86	33	38	3	77	24	132	41	18	4	8	6	1	.....	.....	1	.....	.....
1897.....	83	34	37	.....	74	22	107	44	12	7	6	6	2	.....	3	.....	.....	.....
1898.....	85	31	47	.....	78	22	111	38	12	7	.....	9	12	.....	1	.....	.....	.....
1899.....	92	27	50	7	67	15	123	27	13	6	.....	10	9	.....	1	.....	.....	.....
1900.....	92	27	50	4	43	21	104	18	24	19	17	1	14	.....	5	.....	1	.....
1901.....	125	22	54	3	78	*16	139	27	25	25	22	8	1	.....	.....	2	1	.....
Total.....	849	278	254	31	677	506	1,166	498	169	97	75	67	53	20	13	5	4	1

\*I have arranged the nationalities of the above table for the 1901 report into two groups: the first comprises the Americans, English, Welsh, Scotch, Irish and Germans; all the other nationalities are in the second group. The first group numbered 849, and the second 689. The total is 1,538. I have arranged practically a complete list of all the different nationalities, and it agreed with the number of employees as given by the operators for December, 1901.

From the first group 257, and from the second 256 persons lost their lives in and about the mines. The second group suffers by comparison of fatalities. The first group shows that 3.05 persons lost their lives for every 1,000 persons employed, while the second group shows that 4.66 persons lost their lives for every 1,000 employed, an average loss of life of 3.54 for every 1,000 persons employed in and about the anthracite mines.

If the first group comprised all the employees, and the ratio of fatal accidents remained the same, the number of fatalities would have been 448, a reduction of 5, or 12.64 per cent.

I have no facts to back up these statements, except the above figures and similar figures in my last report, yet I am firmly of the opinion that a better knowledge of coal mining and a more thorough knowledge of the English language would have a great tendency to reduce the number of accidents in the second group.

Statistical Table Showing Number of Employees Inside and Outside the Anthracite Mines; the Number of Fatal Accidents; the Number of Fatal Accidents per 1,000 Persons Employed; and the Production in Tons per Fatal Accidents Inside for the Years 1881-1901.

Years.	Number of employees inside of mines.	Number of fatal accidents inside.	Ratio of lives lost inside, per 1,000 employed.	Production in tons of 2,000 lbs. for every life lost inside of mines.	Number of employees outside of mines.	Number of fatal accidents outside.	Percentage of lives lost outside, per 1,000 employed.
1881.	43,619	234	5.13	144,594	30,412	29	1.28
1882.	50,754	250	4.93	138,285	31,436	41	1.30
1883.	56,298	274	4.87	135,666	35,153	49	1.40
1884.	61,922	286	4.65	127,507	39,151	46	1.75
1885.	62,601	290	4.61	129,456	37,419	12	1.22
1886.	63,120	236	3.69	161,662	39,114	43	1.10
1887.	67,716	270	3.99	154,045	38,801	46	1.18
1888.	78,988	317	4.03	147,313	43,530	47	1.08
1889.	74,178	339	4.35	132,819	45,456	58	1.28
1890.	75,013	323	4.30	139,009	46,306	55	1.16
1891.	76,609	372	4.85	133,406	46,739	56	1.19
1892.	81,553	391	4.40	141,689	48,212	57	1.18
1893.	86,887	388	4.49	136,186	51,682	68	1.30
1894.	87,001	368	4.19	143,198	52,038	78	1.52
1895.	89,650	374	3.8	161,999	54,031	67	1.24
1896.	94,878	430	4.53	125,216	55,320	72	1.30
1897.	95,812	512	5.38	141,346	53,745	51	.99
1898.	91,171	396	3.96	146,668	51,245	51	.99
1899.	92,222	389	4.22	155,772	45,433	72	1.49
1900.	91,146	358	4.26	160,233	49,676	73	1.67
1901.	98,164	441	4.47	152,142	49,217	72	1.46

Statistical Table Showing the Number of Miners, Miner's Laborers employed in the Anthracite Mines, the Number and Rates of Each Class Killed per 1,000 Employed, the Average Number of Days Worked by Breakers, and the Average Production per Day Worked for the Years 1881-1901.

Years	Number of miners employed each year.	Number of miners killed.	Ratio of miners killed per 1,000 employed.	Number of miners' laborers employed each year.	Number of miners' laborers killed each year.	Ratio of miners' laborers killed each year per 1,000 employed.	Average number of days worked by breakers each year.	Average production per day worked by breakers
1881.	12,806	114	4.99	16,726	70	4.19	221	136,696
1882.	14,812	135	5.91	15,229	56	3.66	218	141,594
1883.	17,310	136	5.37	16,879	67	3.97	222	149,552
1884.	27,100	132	4.87	19,606	81	4.13	192	167,899
1885.	27,900	160	5.65	20,128	86	4.27	204	164,319
1886.	25,876	131	5.04	17,668	68	3.98	206	172,496
1887.	25,388	102	3.45	17,548	57	3.25	206	178,544
1888.	21,747	102	4.69	17,852	87	4.87	217	191,002
1889.	26,366	194	6.36	19,368	75	4.08	197	198,049
1890.	28,906	126	5.05	18,620	95	5.10	210	190,901
1891.	30,552	180	5.89	19,590	119	6.07	213	208,079
1892.	30,770	189	6.14	22,110	120	5.43	202	225,312
1893.	32,881	195	5.93	22,853	108	4.73	202	233,562
1894.	32,257	218	6.54	23,942	90	3.80	177	260,035
1895.	34,553	179	5.18	24,628	145	5.89	187	273,822
1896.	37,000	204	5.51	26,350	134	5.09	170	282,790
1897.	36,932	230	5.69	27,277	99	3.63	181	310,399
1898.	36,377	176	4.84	24,000	121	5.15	151	312,218
1899.	39,421	199	5.46	23,946	114	4.76	170	300,867
1900.	36,832	184	4.98	24,613	95	3.86	176	291,007
1901.	37,804	224	5.92	26,265	122	4.64	196	308,000



Statement Showing the Production of coal in Tons of 2,000 Pounds the Number of Tons Produced per employe Inside, the Quantity of Explosives used, and the Number Tons Gotten for Each Pound of Explosives Used in the Anthracite Mines From 1892 to 1901 inclusive.

Years.	Production of coal in tons of 2,000 lbs. for each year.	Average number of tons per employe inside.	Number of pounds of black powder used each year.	Number of pounds of dynamite used each year.	Average number of tons of coal produced per pound of explosives used.
1892.	51,226,977	617	30,981,875	1,062,190	1.59
1893.	52,841,110	625	31,723,771	1,324,142	1.60
1894.	50,965,920	611	30,755,450	1,713,235	1.57
1895.	57,311,840	600	32,766,775	1,797,494	1.61
1896.	53,891,250	644	32,117,950	1,733,970	1.59
1897.	52,731,035	567	31,844,550	2,415,650	1.50
1898.	52,302,594	574	30,670,100	2,025,015	1.57
1899.	61,518,731	655	34,317,275	2,649,417	1.69
1900.	57,363,796	682	30,329,500	2,454,641	1.61
1901.	67,094,065	680	38,020,100	4,155,685	1.59

Number of gaseous and non-gaseous mines, number of foremen, assistants and fire bosses, production from gaseous and non-gaseous mines and washeries and percentage of production from each, in the Anthracite region for 1900.

Districts.	Number of gaseous mines in each district.	Number of foremen and assistant foremen in gaseous mines in each district.	Number of fire bosses in each district.	Number of non-gaseous mines in each district.	Number of foremen and assistant foremen in non-gaseous mines in each district.	Production in tons from gaseous mines in each district.	Production in tons from non-gaseous mines in each district.	Production in tons from washeries in each district.	Percentage of production from gaseous mines.	Percentage of production from non-gaseous mines.	Percentage of production from washeries.
First, .....	15	27	43	26	39	2,705,145	3,450,728	183,075	54.65	42.47	2.87
Second, .....	28	56	86	3	3	5,708,715	94,136	636,261	88.79	1.46	9.74
Third, .....	44	97	108	6	6	6,714,775	588,100	283,996	90.77	4.73	4.11
Fourth, .....	46	53	100	4	4	3,263,412	225,163	97,106	86.24	27.62	1.13
Fifth, .....	24	48	39	16	27	5,474,513	1,357,968	540,556	89.31	27.03	3.53
Sixth, .....	24	56	120	1	6	6,476,911	336,264	477,497	93.11	5.53	1.28
Seventh, .....	27	40	139	6	6	4,022,231	136,240	116,057	94.10	3.18	2.71
Eighth, .....	27	40	96	6	6	4,022,231	136,240	116,057	94.10	3.18	2.71
Total and percentage, .....	279	429	808	76	93	42,829,942	6,762,854	1,794,521	83.62	12.87	3.50

STATEMENT, Showing the quantity of coal produced by each company which produced more than 700,000 tons, the number of persons employed by said companies in the Anthracite Districts during the year 1900.

Names of Companies.	Number of Inspection Districts.		Production in tons.	Number of employees.
Philadelphia and Reading Coal and Iron Co., .....	Sixth, Seventh and Eighth,	First, Second, Third and Fourth,	8,279,579	25,427
Lehigh, Lackawanna and Western Railroad Co., .....	First, Second, Third and Fourth,	First, Second, Third and Fourth,	4,322,735	11,774
Lehigh and Hudson Canal Co., .....	Fourth, Fifth and Sixth,	Fourth, Fifth and Sixth,	4,282,988	11,297
Pennsylvania Railroad Co., .....	Third, Fourth, Fifth, Sixth and Seventh,	Third, Fourth, Fifth, Sixth and Seventh,	3,232,532	12,188
Lehigh Valley Coal Co., .....	Fourth, Fifth and Sixth,	Fourth, Fifth and Sixth,	3,138,572	8,472
Lehigh and Wilkes-Barre Coal Co., .....	Fifth, Sixth and Seventh,	Fifth, Sixth and Seventh,	3,079,828	7,168
Lehigh Coal and Navigation Co., .....	First, Second, Third, Fourth, Fifth and Sixth,	First, Second, Third, Fourth, Fifth and Sixth,	2,221,897	6,885
Temple Iron Co., .....	First and Third,	First and Third,	1,583,395	3,207
Cress Creek Coal Co., .....	Fifth and Sixth,	Fifth and Sixth,	1,243,617	3,018
Marble Head & Co., .....	Fourth,	Fourth,	1,070,628	2,256
Kingsdon Coal Co., .....	First,	First,	912,566	2,226
Hillsdale Coal Co., .....			78,415	2,643
Total, .....			36,296,439	111,162

The above thirteen companies produced 71.66 per cent. of the total anthracite production and employed 70.49 per cent. of the labor.

Number and percentage of each class of fatal accidents that occurred in and about the Anthracite coal mines from 1892 to 1901 inclusive.

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	Grand Total.	Percentage.
By falls of coal, slate and roof, .....	192	190	187	189	255	204	185	296	175	296	2,039	52.08
By mine cars, .....	57	74	53	52	49	40	44	51	60	69	549	14.03
By explosions of gas, .....	57	46	29	31	41	36	33	28	38	33	371	9.51
By explosions of powder and blasts, .....	36	41	46	51	37	48	35	38	43	51	426	10.81
By falling into shafts, slopes, etc., .....	14	13	19	18	24	16	15	16	19	24	173	4.55
By being crushed at batteries, .....	2	1	1	3	2	1	1	2	.....	1	11	.....
By mules, .....	2	7	4	5	6	.....	.....	5	.....	.....	40	1.31
By suffocation, .....	1	17	26	3	9	20	16	5	11	5	113	2.88
By suffocation, .....	1	13	20	3	9	17	25	23	9	32	188	4.80
From miscellaneous causes, .....	20	15	20	11	9	17	25	23	9	32	188	4.80
Total accidents inside, .....	379	416	385	393	452	382	395	387	355	441	3,915	100
By cars, .....	19	14	23	26	18	21	15	26	28	19	299	38.21
By machinery, .....	11	13	13	15	17	9	14	12	10	12	126	23.00
By suffocation, .....	5	1	4	1	4	1	5	12	4	1	38	6.54
By boiler explosions, .....	.....	2	10	4	9	.....	.....	.....	.....	.....	1	.....
From miscellaneous causes, .....	4	10	11	12	22	10	10	11	14	39	146	26.69
Total accidents outside, .....	39	40	61	58	70	41	46	64	56	72	547	100



## AMENDMENTS TO THE ANTHRACITE MINE LAW.

The Legislature at its last session amended Article 2 of the above law, which was approved by the Governor on the 8th day of May, 1901. The amendment went into effect January 1, 1902. It provides for eight additional mine Inspectors, making the number sixteen.

Section 15 is as follows: "He (the Inspector) shall examine all the collieries in his district at least once every two months, and as often in addition thereto as the necessities of the case or the conditions of the mines require \* \* and he shall personally visit each working face, and see that the air currents are carried to the working faces \* \* He shall, every three months, make a report of the condition of each working face in each colliery \* \* to the Chief of Bureau of Mines \* \* designating the gangways in which the working is situated, and the breast number of such working, and their condition shall be designated by the words 'good,' 'fair,' or 'bad' \* \* He shall certify in said report that the employes are hoisted to the surface \* \* according to law \* \* he shall attend every inquest upon the bodies of persons killed \* \* he shall visit the scene of the accident \* \* wherever loss of life or serious personal injury occurs \* \*"

This amendment should have become effective January 1, 1903, instead of January 1, 1902, or else the law should have gone into effect on the day the Governor gave it his approval. As it is, the law provides work for sixteen inspectors during 1902, while only eight are commissioned, and the number cannot be increased until January, 1903.

While it would have been a physical impossibility for even the sixteen Inspectors, had they been on duty, to have fulfilled the requirements of this amended article, the eight Inspectors can only do as they have heretofore, their best, to keep secure the lives and property in and about the mines.

This amendment divides the anthracite coal fields into "Six Inspection Districts:" First, the county of Luzerne; second, the county of Lackawanna; third, the county of Carbon; fourth, the county of Schuylkill; fifth, the county of Northumberland, and sixth, the county of Columbia.

The amendment provides for five Inspectors for Luzerne, four for Lackawanna, four for Schuylkill, one each for Carbon, Northumberland and Columbia. All the additional Inspectors will be elected at the next general election, except one for Carbon county, for which

the amendment provides as follows: "At the expiration of the term of office of any of the present Inspectors who hold office under the appointment of the Governor of the Commonwealth, the qualified electors of the Third Inspection District shall elect one inspector \* \*." I take this to mean that at the expiration of the term of the present Inspector, the qualified voters of the Third Inspection District shall elect one Inspector; but as the term of the present Inspector does not expire until September, 1906, the amendment will not take effect in Carbon county until January, 1907.

Why Carbon county was thus discriminated against, I am unable to say. There are other counties that this amendment does not provide for, by giving the qualified voters the same privilege of casting their votes for the inspector, that is given to the voters in larger counties. In my opinion, all counties, large or small, should have received the same treatment under the law.

The counties not named in the amendment are provided for as follows: "It shall be the duty of the Chief of the Bureau of Mines to direct one or more of the Inspectors \* \* to inspect collieries in such counties as are not mentioned in the law."

The counties provided for in the foregoing section are Susquehanna, Wayne, Sullivan and Dauphin. The first two counties are at present included in the First District, Lackawanna county, while Sullivan is part of the Third District, Luzerne county, and Dauphin is part of the Eighth District, Northumberland county. Part of Section 7 of the amendment reads: "Said Inspectors elected under this act shall be under the direction of the Chief of Bureau of Mines, who shall assign districts to the several Inspectors in the respective counties in which they are elected."

It can be seen that this Section only gives the right to the Chief of the Bureau of Mines "to assign Inspectors (only) in the respective counties in which they the (Inspectors) are elected; while part of Section 12 reads: "It shall be the duty of the Chief of Bureau of Mines \* \* to direct one or more of the Inspectors \* \* who shall be elected under the act to which this act is an amendment, to inspect such collieries \* \* in counties not mentioned in the amendment \* \* in such manner and at such times as is required by law \* \*."

I am at a loss to know how both of these sections shall be obeyed, but I must choose the lesser evil by obeying Section 12. Under the law, no Inspector, even when sent under the authority of Section 12, will have the legal right to examine any mines outside of the county in which he is elected.

Under this amendment the best subdivision that can be made will be an unfair and arbitrary one, as the districts cannot be divided

so as to give each Inspector equal duties to perform, and no fair division can be made while county lines are adhered to as boundary lines for the districts.

If a proper division could have been made under the amendment, each inspection district would have had an equal production of about 3,700,000 tons; the number of employes under the supervision of each Inspector would have been about 9,000; the fatalities would have averaged for each district about 32; while the non-fatal accidents would have averaged about 75 for each district.

By an inspection of the table following these remarks, which was arranged from the report of the Bureau for the year 1900, and which closely corresponds to that for 1901, it will be seen that the number of mines under each inspector will vary from 7 to 29; the production from 1,571,300 tons to 4,188,340; the number of employes from 4,239 to 15,105; the fatal accidents from 8 to 32 and the non-fatal ones from 14 to 89. The Inspectors who will have the lesser number of mines and employes, can easily live up to the letter of the law, while the others cannot by any possibility come near to complying with the provisions of this amendment. There should be some way by which the work of the inspectors can be more equally divided, otherwise the amendment itself should be further amended by the next Legislature.





Production of coal in tons by districts in the Anthracite coal mines, from 1892 to 1901 inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First, .....	5,871,695.30	6,292,121.34	5,907,331	6,510,817	6,217,447	6,219,833	6,515,790	7,374,571	6,398,918.16	7,728,344
Second, .....	6,011,537.19	5,566,475.19	5,674,329	6,183,485	5,895,669	5,985,639	5,495,170	6,774,458	6,427,112.00	8,654,060
Third, .....	5,636,764.87	5,629,714.87	5,361,362	6,213,854	5,714,323	5,875,827	5,361,107	6,834,711	6,296,921.18	6,925,568
Fourth, .....	5,546,167.09	5,629,714.87	5,192,927	5,506,526	5,017,562	5,437,418	5,806,277	8,608,152	8,586,741.46	9,801,332
Fifth, .....	5,845,734.19	6,329,078.76	6,192,927	7,591,566	6,017,471	6,477,493	6,233,879	7,181,027	7,176,181.00	6,374,539
Sixth, .....	6,287,394.06	6,671,807.00	6,311,621	7,161,898	6,724,717	6,477,493	6,713,154	7,188,344	7,176,181.00	7,098,358
Seventh, .....	5,584,678.17	5,288,892.88	5,431,823	6,184,542	5,594,619	5,108,918	5,071,831	6,238,234	6,071,701.00	7,098,358
Eighth, .....	3,403,662.00	3,142,514.62	3,231,315	3,955,013	4,239,847	4,306,222	4,158,671	4,314,567	4,271,528.00	5,172,539
Total, .....	45,858,371.02	47,176,532.27	45,496,179	59,846,104	48,074,320	46,947,354	47,115,174	54,034,224	51,217,318.00	59,905,931

Production of Anthracite coal in tons by counties from 1892 to 1901, inclusive.

Counties.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Carbon, .....	1,427,512.57	1,510,289.70	1,539,335	1,577,116	1,458,551	1,327,235	1,043,683	1,601,595	1,633,061	1,679,392
Cedar-bark, .....	889,489.87	741,596.71	500,337	463,642	443,830	481,433	634,476	729,751	1,084,231	1,084,231
Dauphin, .....	637,879.6	610,123.17	693,067	712,866	712,325	712,866	667,469	697,636	697,636	711,582
Lackawanna, .....	11,416,536.95	11,957,361.72	11,710,982	11,851,369	11,793,600	11,016,871	11,588,801	13,218,949	12,292,168	15,409,040
Lehigh, .....	15,293,336.86	15,957,161.62	17,470,982	19,039,743	17,663,600	17,141,809	18,135,398	19,890,742	19,179,523	21,296,312
Luzerne, .....	3,293,336.86	3,731,161.62	3,892,660	4,173,141	4,117,669	3,774,667	3,519,395	4,339,547	4,188,343	4,841,619
Northampton, .....	3,764,733.6	9,492,298.57	9,985,692	11,435,288	11,012,772	10,571,943	11,980,700	12,226,938	11,616,161	13,640,767
Scranton, .....	3,764,733.6	9,492,298.57	9,985,692	11,435,288	11,012,772	10,571,943	11,980,700	12,226,938	11,616,161	13,640,767
Sullivan, .....	475,822.46	571,536.19	413,578	522,141	551,778	164,946	117,523	163,755	299,322	136,165
Susquehanna, .....	475,822.46	571,536.19	413,578	522,141	551,778	164,946	117,523	163,755	299,322	136,165
Wayne, .....	475,822.46	571,536.19	413,578	522,141	551,778	164,946	117,523	163,755	299,322	136,165
Total, .....	45,858,571.10	47,176,562.29	45,508,179	50,846,104	48,674,239	46,147,234	47,114,174	54,014,224	51,211,315	59,955,561

Number of employes in and about the Anthracite coal mines from 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First.	14,121	15,637	16,614	16,272	17,601	18,666	17,850	17,143	17,285	18,773
Second.	14,111	14,429	15,627	16,369	16,553	16,578	15,725	15,419	16,789	18,023
Third.	15,020	15,779	16,965	17,413	18,577	17,326	18,098	17,156	18,600	17,654
Fourth.	21,406	22,790	22,764	24,669	26,659	25,650	25,317	25,698	23,667	24,317
Fifth.	16,377	17,540	18,351	18,467	17,608	17,119	14,649	14,243	15,111	16,108
Sixth.	20,698	21,812	20,149	18,810	20,979	21,056	20,159	19,966	20,278	20,277
Seventh.	18,467	19,117	19,121	19,289	20,185	19,670	19,357	20,317	20,655	19,814
Eighth.	19,417	19,777	19,754	11,366	13,335	13,492	12,945	12,682	12,641	12,655
Total	150,197	158,021	159,695	145,605	147,670	149,557	142,420	140,583	143,726	147,651

Number of employes in and about the mines of the Anthracite region by counties from 1892 to 1901, inclusive.

Counties.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Carbon.	3,848	4,410	5,391	4,332	4,153	4,718	2,980	2,328	2,517	6,365
Columbia.	2,421	2,634	2,011	1,756	2,074	1,909	2,436	2,309	2,061	2,329
Dauphin.	2,164	2,004	2,062	1,985	1,988	2,073	2,174	2,391	2,577	2,833
Lackawanna.	27,233	29,021	30,629	30,367	32,771	33,802	32,422	30,885	32,813	35,298
Lehigh.	47,544	51,392	52,904	55,788	56,717	55,138	52,817	52,528	53,749	51,286
Northumberland.	12,835	13,487	13,870	14,522	14,787	15,139	13,833	14,697	15,105	14,177
Selkirk.	32,019	33,611	31,656	32,202	37,630	35,008	34,238	33,208	33,228	33,907
Sullivan.	561	591	.....	512	334	327	321	371	321	434
Susquehanna.	563	1,046	1,012	2,191	1,186	1,234	1,185	1,210	1,250	989
Wayne.	.....	.....	.....	.....	1,186	.....	.....	466	11	53



List of fatal accidents that occurred in and about the Anthracite coal mines from 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First.	55	51	47	39	51	52	51	68	40	58
Second.	23	25	41	34	39	58	37	49	55	63
Third.	79	61	51	61	108	62	85	62	59	84
Fourth.	83	84	10	74	73	60	55	81	71	78
Fifth.	48	38	58	52	42	33	32	43	40	60
Sixth.	54	60	74	59	67	72	51	52	65	73
Seventh.	45	37	38	39	46	46	46	52	49	53
Eighth.	50	27	50	53	46	28	37	34	32	35
Total	418	456	446	421	522	423	415	461	411	513

List of non-fatal accidents that occurred in and about the Anthracite mines from 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First, .....	115	96	98	121	134	125	126	116	118	118
Second, .....	181	173	141	192	161	149	154	159	152	186
Third, .....	163	178	148	167	209	145	201	206	181	173
Fourth, .....	189	221	229	221	225	263	278	188	244	222
Fifth, .....	110	99	95	102	91	114	72	86	76	89
Sixth, .....	129	139	94	52	99	73	72	99	130	144
Seventh, .....	101	119	76	114	106	119	112	90	91	95
Eighth, .....	53	44	40	106	140	112	115	86	107	116
Total, .....	1,622	1,669	921	1,475	1,465	1,106	1,134	1,039	1,037	1,243

Classification of employees who were killed or fatally injured in and about the mines of the Anthracite region from 1882 to 1901, inclusive.

Years.	Inside Employees.										Outside Employees.					
	Mine foremen.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys, etc.	All others.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	All others.	Total outside.	Grand total.	
1882.	3	1	135	56	39	11	18	268		7	3	11	10	24	292	
1883.			136	67	47	13	26	297		4	11	7	1	16	323	
1884.	1	1	132	81	28	13	30	286		6	9	12	6	31	317	
1885.			160	86	16	6	28	299		4	7	13	8	34	333	
1886.			131	68	18	6	18	245		1	6	9	16	33	278	
1887.	2	1	172	57	23	10	30	228	3	3	3	9	13	31	265	
1888.			169	59	33	9	31	332		1	6	6	22	32	264	
1889.	1	1	141	65	37	10	29	348	1	1	9	10	16	37	385	
1890.	1		146	65	37	8	26	332		13	8	12	26	40	378	
1891.			180	119	38	7	36	352		2	2	11	11	25	433	
1892.	3	3	189	129	36	8	16	376	2	2	4	4	11	26	448	
1893.			145	108	47	12	24	390				1	11	16	438	
1894.			218	91	38	5	32	385				12	11	61	448	
1895.	3	1	179	115	31	7	28	368		6	4	13	18	58	428	
1896.	2	1	204	134	46	10	48	449		3	4	12	31	53	523	
1897.	3	2	210	99	26	4	43	387		4	3	6	25	37	424	
1898.	3	4	176	124	33	6	22	370	1	4	4	13	23	41	411	
1899.	1	2	199	114	39	18	22	396	1	2	6	10	46	65	461	
1900.			184	95	33	8	27	352		3	2	9	46	59	411	
1901.	5	2	224	122	45	6	37	411			3	9	61	72	513	

Number of fatalities and causes of fatal accidents that occurred in and about the mines of the Anthracite region from 1882 to 1901, inclusive.

Years.	Inside of Mines.										Outside of Mines.																									
	By Falls		By mine cars.		By explosions of gas.		Powder and dynamite.		By blasts, etc.		By Falling Into		Crushed at batteries.		By mules.		By suffocation.		Miscellaneous causes.		Total inside.		By cars.		By machinery.		By suffocation.		By boiler explosions.		Miscellaneous causes.		Total outside.		Grand total.	
	Of coal.	Slate and roof.	By mine cars.	By explosions of gas.	Powder and dynamite.	By blasts, etc.	Shafts.	Slopes.	Manways and	By Falling Into	Crushed at batteries.	By mules.	By suffocation.	Miscellaneous causes.	Total inside.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.	Grand total.	By cars.	By machinery.	By suffocation.	By boiler explosions.	Miscellaneous causes.	Total outside.	Grand total.							
1882.	62	68	51	25	5	16	13	5	4	...	...	...	...	...	328	13	13	...	...	1	7	31	92	...	...	...	...	...	...	...	...	...	...	...		
1883.	58	66	52	32	11	28	14	...	...	...	...	...	...	16	377	24	12	...	...	4	6	46	287	...	...	...	...	...	...	...	...	...	...	...		
1884.	74	61	61	19	15	29	11	11	...	...	...	...	...	53	381	16	13	...	...	3	19	51	332	...	...	...	...	...	...	...	...	...	...	...		
1885.	65	87	85	25	12	18	15	17	...	...	...	...	...	...	318	19	9	...	...	...	...	40	258	...	...	...	...	...	...	...	...	...	...	...		
1886.	77	72	43	35	...	...	...	...	...	...	...	...	...	...	210	17	11	...	...	5	10	58	28	...	...	...	...	...	...	...	...	...	...	...		
1887.	82	89	58	19	...	...	...	...	...	...	...	...	...	...	374	16	12	...	...	1	12	41	315	...	...	...	...	...	...	...	...	...	...	...		
1888.	87	100	58	29	10	24	9	1	...	...	...	...	...	...	319	16	12	...	...	...	15	43	362	...	...	...	...	...	...	...	...	...	...	...		
1889.	87	100	58	29	10	24	9	1	...	...	...	...	...	...	319	16	12	...	...	...	15	43	362	...	...	...	...	...	...	...	...	...	...	...		
1890.	70	79	56	60	3	16	17	8	...	...	...	...	...	...	326	25	9	...	...	6	8	55	385	...	...	...	...	...	...	...	...	...	...	...		
1891.	72	97	79	29	13	32	11	6	1	...	...	...	...	17	390	12	11	...	...	7	11	52	428	...	...	...	...	...	...	...	...	...	...	...		
1892.	88	104	57	57	7	29	6	1	7	...	...	...	...	...	379	19	11	...	...	5	13	41	438	...	...	...	...	...	...	...	...	...	...	...		
1893.	86	119	74	45	11	30	7	2	4	...	...	...	...	...	416	14	13	...	...	...	10	40	466	...	...	...	...	...	...	...	...	...	...	...		
1894.	83	104	53	29	18	28	13	5	1	...	...	...	...	...	385	23	13	...	...	2	10	40	466	...	...	...	...	...	...	...	...	...	...	...		
1895.	65	123	52	31	24	27	7	7	4	...	...	...	...	...	363	26	13	...	...	1	11	61	451	...	...	...	...	...	...	...	...	...	...	...		
1896.	68	187	49	41	9	28	13	3	8	...	...	...	...	...	432	18	17	...	...	9	12	41	491	...	...	...	...	...	...	...	...	...	...	...		
1897.	84	120	40	36	10	38	8	3	5	...	...	...	...	...	382	21	9	...	...	...	10	41	493	...	...	...	...	...	...	...	...	...	...	...		
1898.	78	128	41	33	11	27	12	4	7	...	...	...	...	...	397	28	12	...	...	2	14	46	411	...	...	...	...	...	...	...	...	...	...	...		
1899.	78	148	51	28	11	27	12	4	2	...	...	...	...	...	375	26	10	...	...	...	14	64	411	...	...	...	...	...	...	...	...	...	...	...		
1900.	61	114	60	38	8	38	13	5	4	...	...	...	...	...	441	19	12	...	...	1	...	72	513	...	...	...	...	...	...	...	...	...	...	...		
1901.	66	160	63	33	15	36	15	5	4	...	...	...	...	...	441	19	12	...	...	...	...	72	513	...	...	...	...	...	...	...	...	...	...	...		
Total.	1,440	2,081	1,463	663	215	516	197	35	51	...	...	...	...	421	6,955	320	244	...	...	64	252	988	7,913	...	...	...	...	...	...	...	...	...	...	...		

\*Nanticoke disaster, 29 persons were entombed by an inrush of quicksand.

†Two shaft disaster, 58 persons were entombed June 28.



Fatal Accidents per Each 1,000 Employees in and About the Anthracite Coal Mines, and Tons of Coal Mined for Each Fatal Accident From 1870 to 1901 inclusive.

Years.	Employees.	Fatal accidents.	Fatal accidents per 1,000 employees.	Number of tons of coal produced.	Number of tons mined for each fatal accident.
1870.	35,600	211	5.929	12,653,575	59,970
1871.	37,488	210	5.601	13,868,087	66,533
1872.	41,475	166	3.709	13,899,976	83,734
1873.	48,129	224	4.647	18,751,358	83,711
1874.	53,462	231	4.325	17,794,867	77,031
1875.	69,966	278	3.401	20,835,220	87,798
1876.	65,357	226	3.458	20,329,166	90,837
1877.	66,842	199	2.977	21,574,154	108,413
1878.	63,964	187	2.923	20,330,945	108,729
1879.	68,847	262	3.807	26,725,475	102,005
1880.	73,373	201	2.739	24,977,265	124,265
1881.	76,021	269	3.538	30,537,998	113,524
1882.	82,314	292	3.546	31,301,278	107,196
1883.	90,821	323	3.552	33,703,010	104,313
1884.	101,338	332	3.274	32,561,374	98,076
1885.	100,311	315	3.140	33,468,911	116,250
1886.	102,878	279	2.624	34,777,618	124,650
1887.	106,547	319	2.994	37,644,023	118,006
1888.	117,160	364	3.106	41,638,427	114,391
1889.	119,500	385	3.222	38,989,952	101,257
1890.	115,190	378	3.281	40,088,356	106,054
1891.	123,277	428	3.472	44,220,950	103,553
1892.	128,763	396	3.075	45,738,373	115,501
1893.	138,060	449	3.252	47,219,562	105,166
1894.	139,544	439	3.146	45,806,179	103,659
1895.	143,288	421	2.936	50,847,102	120,777
1896.	150,689	502	3.345	48,074,339	95,766
1897.	149,557	424	2.842	46,947,350	110,725
1898.	142,546	411	2.877	47,145,175	114,708
1899.	140,583	461	2.923	54,034,224	131,446
1900.	143,726	411	2.851	51,217,318	124,616
1901.	147,651	513	3.474	59,905,951	116,775

## PROVISIONS FOR WIDOWS AND ORPHANS.

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How to provide for the above is a question that has interested me for many years, and I wish to quote what I wrote upon the subject in my annual report as mine Inspector in 1882. These remarks I then considered of great moment, but at the present time this is a subject of much greater importance by reason of the fact that now there are people of twenty-five or twenty-six nationalities employed in and about the anthracite and bituminous mines of this State, who are aliens to our language, and strangers in a strange land:

"But how to provide for the widows and orphans of those who are killed in and about the mines is the all important question. A few of the miners have been enabled to accumulate a small sum as a provision for their families in case of their death, but they are only a few, and the majority of them leave their families completely destitute. All who are conversant with the subject are aware that the bereaved ones are tolerably well cared for, for a short time after the death of the husband and father, as some assistance is given by the operator, some by his former fellow workmen, a little by friends or relatives; but of course this does not last, and soon the poor woman is forced to the stern reality that they are indeed 'alone in the world.' But in justice I must assert that there are exceptional cases, where a kind hearted operator makes inquiry as to the welfare of the widows and orphans in the neighborhood of his works, and renders them assistance, and very often they do not know who their benefactor is; but these are exceptional cases. Something, however, should be done in a general way to alleviate the distress of this large class in every community throughout the anthracite coal region, as more fatal accidents occur that are incident to coal mining than in any other industry in the State.

"During the year 1881, 131 wives were left widows and 442 children were orphaned by accidents in and about the anthracite mines, which is nearly the yearly average for the past ten years.

"I do not wish to advocate any particular system, but think the system that prevails in Germany would be worthy the study of philanthropists, and perhaps from this, a law can be enacted to provide means of alleviating the distress of this class of sufferers."

In December, 1883, Mr. W. D. Zehner, the General Superintendent of the Lehigh Coal and Navigation Company inclosed to me a copy of the rules adopted by that company in conjunction with their employes, in the maintenance of a relief fund:

“Rules.

“This fund shall be created and maintained by the following contributions, to be made monthly:

“The Lehigh Coal and Navigation Company will pay into it one cent for every ton of coal produced at its mines. The inside workmen employed on its property will pay into it one per cent. of their earnings, and the outside workmen will pay into it one-half of one per cent.; but no one shall pay more than one dollar in any one month

\* \* All moneys which shall be paid into this fund shall be placed in charge of a Board of Trustees to be appointed from time to time by the President of the Lehigh Coal and Navigation Company, and to be chosen by him, partly from the officers of the company and partly from business men of experience and good reputation in the mining region.

“A report of the receipts and expenditures of this fund shall be published by the Board of Trustees at least once in each year \* \* The fund thus established is believed to be ample to meet all claims arising from accidents to the contributors, and if, as is hoped, there shall be more than is required under this plan, the benefits will be increased as from time to time the trustees may think prudent.

“The Lehigh Coal and Navigation Company, in making this contribution and establishing this fund, desires to relieve the suffering which the accidents cause among its workingmen, and to render unnecessary the collections which make a heavy tax on the benevolent; and also to promote the growth of kindly feeling which now exists between the company and the men engaged in its service.”

In my annual report for 1886, I find the following:

“During the years 1884, 1885 and 1886, the men and the company paid into this fund the sums of \$28,217.88 and \$30,912.22 respectively, to which \$902.42 interest on investment was added, making the total receipts the sum of \$60,032.25.

“The men who were injured, and the families of persons killed during the same years, received the sum of \$12,059, and \$902.42 were paid for expenses, leaving a cash balance on hand the first day of January, 1887, of \$17,070.26.”

Since writing the above, in response to an inquiry I have received the following letter from the Superintendent, Mr. Zehner:

“Mr. James E. Roderick, Chief of Bureau of Mines, Harrisburg, Pa.:

“Dear Sir: I have your letter asking about the formation and management of the Beneficial Fund of the Lehigh Coal and Navigation Company.

“I have been looking carefully into the matter in order to gather the facts which I think will be interesting to you.

“The Lausford Beneficial Fund was started on the first of January, 1884, by the adoption of certain rules and regulations.

"The fund out of which benefits are paid to disabled miners and to the widows and orphans of those killed in the service of the company, is derived from contributions from the employes who joined the association, and from the company.

"Originally the men working in the mines were assessed one per cent. of their wages not to exceed \$1.00 per month.

The outside men were assessed one-half of one per cent. of their wages, and the company contributed one cent per ton of its production.

In 1894, the fund had accumulated to such an extent that the contributions were cut down one-half, at which rate they are now assessed, but the accumulation of the fund has been so nearly absorbed that in the near future it will be necessary to increase the contributions by one-half the present rate.

"In recognition of the loyalty of the employes of the company in refusing to participate in the strike, general throughout the anthracite region in 1900, the company presented to the fund a permanent endowment of \$25,000.

"The following is a statement of the operation of the fund from its inception to December 31st, 1901.

"Amount contributed by the L. C. and N.

Co., .....	\$192,616.39
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"Amount contributed by employes, .....	150,681 00
--	------------

"Interest account, .....	20,510 77
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\$363,808 16

"Benefits paid employes, .....	\$308,613 70
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"Total expenses, .....	15,310 40
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\$323,924 10

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\$39,884 06

"Invested, .....	\$35,000 00
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"Cash balance, Dec. 31, 1901, .....	4,884 06
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\$39,884 06

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"The benefits paid by the fund are as follows:

"In case of injury not resulting in death, one-half of the average earnings of six months preceding the accident are paid until the injured person is able to resume work or for a period not exceeding six months thereafter.

"In case of fatal accident, \$30.00 are paid for funeral expenses and the family of the deceased is paid for eighteen months, one-half of his monthly average earnings for six months preceding the accident.

"While it is optional with the employes of the company to become



members of the association, in point of fact, practically all of them are glad to contribute to the fund.

“Respectfully yours,

“W. D. ZEHNER, Supt.”

With the coal mines in the hands of a few companies, it would be an easy matter to establish a fund such as that of the Lehigh Coal and Navigation Company's, which undoubtedly would relieve in a great degree the distress now existing about the mining communities of this State.

I have written the above from practical knowledge for the past thirty years of the conditions that have existed, but the half of the story of the dependent ones has never been told. We learn a great deal about the suffering in mining communities from the Metropolitan newspapers during periods of strikes and labor disturbances amongst the miners, but when peace is restored, the scribes return to the cities, not to appear again until another strike takes place about the mines.

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#### EDUCATION AND TRAINING FOR THE YOUNG WHO ARE CRIPPLED ABOUT THE MINES, FACTORIES, ETC.

While on my travels through the mining districts of this State, I have been shocked at the great number of unfortunates who have been the victims of accidents in mines, factories, machine shops, etc., and have been greatly impressed with the need of some institution where these cripples can be educated and trained in suitable occupations that will enable them to earn a respectable living. I cannot do better than to quote part of my annual report as Inspector of Mines for the year 1882, nearly twenty years ago, which I considered applicable then, as it is to a greater extent now:

“The attention of all fair-minded people is called to the great necessity for providing education and suitable occupations for young men and boys who are incapacitated by accidents from earning their bread ‘by the sweat of their brow.’ There is an army of these cripples in the anthracite coal fields of Pennsylvania; some are minus a hand, others a foot or a leg, and exceptional cases are to be found where they are wanting both arm and leg. They are pitiful objects, indeed, when seen before the break of day, on winter mornings, on the way to their work in the breakers.

The young men and boys in and about the coal mines are as bright and intelligent as any class having the same opportunities, and I claim that if there were a way of educating them and giving them suitable occupations, according to their abilities, our State would be

the recipient of unnumbered blessings in return for the outlay incident to the work.

Pennsylvania has provided nobly for the orphans of her gallant soldiers, by means of a thorough system of education; and these unfortunate victims of mines and manufactories could be prepared to hold some positions in life that do not require manual labor."

This appeal made nearly twenty years ago, caused only a passing notice by the press, and some of our good people thought the remarks were timely, yet nothing more was said or done, and no notice whatever was taken of them by the Legislature.

Stephen Girard cared nobly for the orphan children of Philadelphia, and other wealthy men have ever since been piling up large endowments for our colleges and universities, so is it too much to hope that a Carnegie, Rockefeller, Morgan, Schwab, Vanderbilt, Gould, Hanna, or some other wealthy man, or possibly a combination of men, who have acquired wealth from the mines, factories and workshops of our State, will join hands and do for these unfortunates of the mines, factories and workshops, and for all such unfortunates from every avocation in the State, what the honored Stephen Girard did for Philadelphia? Such institution or institutions, permanently established and properly endowed, would be a lasting monument to the donors, and I sincerely hope that some of our wealthy people will take time to look into the merits of the matter.

At the time this is being written, one of Philadelphia's millionaires is preparing to build and endow at his own expense, an institution for the care and education of crippled children, where they will be taught useful occupations such as will fit them, after a few years, to be self-supporting. It is estimated that the cost to him will amount to \$2,000,000. Surely such an example as this is worthy of the emulation of men who have grown wealthy from the productions of the mines and manufacturing establishments in our State.

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#### CHANGES RECOMMENDED IN THE REPORT OF THE BUREAU OF MINES.

I would most respectfully urge upon the next Legislature the advisability of providing for an increase in the number of copies of the Report of the Bureau of Mines now allotted to the Department of Internal Affairs. The demand for them is very great and is constantly increasing, as requests have been received for them from all sections of this Commonwealth where coal is mined, from every state in the Union in which coal is produced, and also from European countries, and even from far Australia and New South Wales.

Under an act of the Legislature of 1899, 2,000 copies were author-

ized to be given to the Department of Internal Affairs for distribution; of these, 1,400 are sent to the Inspectors of Mines, twenty in number at the present time. Under an amendment to the Anthracite Mine Law enacted by the Legislature of 1901, the number of inspectors in the anthracite region is soon to be increased from eight to sixteen, which will make the total number twenty-eight. It can be readily seen, therefore, that there will be an extremely limited number for each inspector if any number of them is to be kept on hand in the Bureau of Mines to supply the constant and increasing demand. With the small number allotted to each Inspector at present, some of them do not have one for each mine in his district, when there should be one for each mine foreman and fire boss, not to speak of the thousands of intelligent miners who are constantly asking for them, and who would greatly appreciate the favor if they could each have a copy.

There is another matter in connection with the publication of the report that I would most earnestly recommend, from an economical standpoint. The report is now issued in one part; in 1890 it covered 490 pages; in 1900 there were 874 pages. Now, as there will soon be sixteen anthracite Inspectors, together with twelve in the bituminous region, it can readily be determined to what dimensions the report will attain. If such legislation should be enacted as to permit the report to be published in two parts, it would be better and more economical. In very many cases, requests come from parties in the bituminous regions asking for copies of the bituminous mine law and a bituminous report, who do not care for the anthracite laws or reports, and in like manner persons from the anthracite region ask for anthracite reports.

If the reports could be published in two parts, each containing its own mine laws, it would do away with an unwieldy book, which will be too heavy for mailing, and the change would I am sure be more satisfactory to all concerned.

## RECAPITULATION.

Total number of tons of coal mined and tons of coke produced, number of days worked, number of persons killed and injured, number of kegs of powder, etc., used in the Bituminous districts of Pennsylvania for the year ending December 31, 1901.

Districts.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at collieries.	Number of tons sold to local trade and used by employes.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Average number of days worked.	Number of persons employed.	Number of fatal accidents.	Number of non-fatal accidents.	Number of kegs of powder used.	Number of pounds of dynamite used.	Number of horses and mules in use.
First.	7,975,495	191,929	31,913	8,198,558	1,498,720	4,190	215	10,195	41	142	42,584	29,240	775
Second.	4,915,388	184,226	114,697	5,222,731	1,498,720	4,190	300	11,517	29	82	5,370	13,840	961
Third.	2,197,710	108,477	27,892	2,304,079	151,585	403	212	8,811	7	40	24,910	13,731	665
Fourth.	2,583,744	68,504	61,246	2,644,979	44,376	500	221	9,581	13	44	42,889	40,160	670
Fifth.	3,118,654	166,638	60,346	3,285,279	44,376	500	221	11,002	41	45	17,531	429,853	1,156
Sixth.	6,686,965	146,751	15,258	6,848,954	3,300,546	8,533	242	10,068	18	21	32,458	61,133	1,691
Seventh.	7,907,827	113,651	206,890	8,226,705	.....	10	189	10,158	53	23	13,450	5,370	833
Eighth.	3,319,983	45,976	13,579	3,383,294	2,559	136	132	6,115	43	19	41,551	98,936	1,128
Ninth.	5,512,173	148,149	57,294	5,667,513	2,815,341	6,284	222	12,157	8	31	32,670	22,459	842
Tenth.	4,228,594	176,629	40,906	4,422,235	438,612	4,444	245	13,157	45	53	13,730	8,753	1,165
Eleventh.	1,476,447	139,518	85,553	1,612,143	4,366,339	8,743	245	10,755	45	53	13,730	8,753	1,165
Twelfth.	4,656,715	156,211	23,883	5,173,392	321,331	1,607	176	7,624	30	60	29,984	37,726	658
Total.	59,974,631	1,435,661	1,068,457	80,914,235	13,123,156	31,815	*216.4	117,602	301	676	314,760	63,801	10,178

\*Average.



## RECAPITULATION—Continued.

Districts.	Number of Boilers.				Locomotives.			Total horse power.	Number of steam engines of all classes.	Total horse power.	Number of pumps delivering water to surface.	Capacity in gallons per minute.	Quantity in gallons delivered to surface per minute.	Number of electric dynamos.	Number of air compressors.
	Cylindrical.	Horse power.	Tubular.	Horse power.	Total horse power.	Steam.	Air.	Electric.							
First.	22	947	151	11,384	16,265	2	.....	22	153	12,739	67	12,871	6,701	31	11
Second.	62	1,993	130	11,101	16,097	13	3	9	172	15,746	77	35,114	16,718	17	21
Third.	23	1,174	109	8,122	9,296	9	.....	5	166	5,152	57	14,374	9,914	4	28
Fourth.	12	200	84	8,179	8,859	17	1	29	86	7,139	25	32,323	11,159	14	13
Fifth.	48	1,946	176	14,245	18,317	51	.....	3	126	15,299	64	18,345	9,196	56	22
Sixth.	22	2,825	110	11,146	16,465	3	3	65	79	10,130	72	15,759	8,965	35	37
Seventh.	9	1,633	51	16,335	18,184	16	.....	1	167	17,351	80	12,324	8,634	17	30
Eighth.	17	1,609	58	14,092	15,759	15	8	15	125	12,393	74	11,701	8,363	17	20
Ninth.	13	1,243	167	11,520	12,930	16	.....	1	179	12,816	44	20,709	18,465	22	13
Tenth.	40	2,450	119	10,921	13,632	23	3	4	236	12,573	65	18,289	6,377	18	15
Eleventh.	17	8,750	119	10,921	13,632	10	.....	1	69	12,573	39	20,709	23,736	17	27
Twelfth.	.....	426	119	12,235	12,965	23	.....	.....	.....	7,599	.....	15,695	9,381	11	.....
Total.	458	18,882	1,435	111,116	160,146	134	23	231	1,572	126,168	702	352,523	132,613	541	255



Table showing causes of fatal accidents and number attributable to each cause, that occurred in and about the Bituminous coal mines, and number of widows and orphans left, by reason of such accidents, during the year 1901.

	1st Dist.		2d Dist.		3d Dist.		4th Dist.		5th Dist.		6th Dist.		7th Dist.		8th Dist.		9th Dist.		10th Dist.		11th Dist.		12th Dist.		Total.		Percentage.	
	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Percentage.	Percentage.
By falls of coal, .....	2	1	3	1	1	1	3	1	3	1	5	1	4	2	1	1	4	1	2	1	2	1	4	1	34	1	64.4	.....
By falls of slate and roof, .....	3	1	12	1	1	1	8	1	17	1	5	1	22	1	1	1	25	1	2	1	13	1	11	1	133	1	48	.....
By mine cars, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By machinery, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By explosion of gas and dust, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By explosions of powder and dynamite, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By explosions of blast, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By electric shocks, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By falling into shafts, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
By mules, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
From miscellaneous causes, .....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17.12	77.77
Total, .....	40	1	28	1	5	2	13	1	40	1	18	1	35	1	2	1	40	1	8	1	43	2	20	1	292	1	100	.....

Number wives left widows, 154.

Children left fatherless, 412

Table showing causes of non-fatal accidents and number attributable to each cause, that occurred in and about the Bituminous coal mines during the year 1901.

Causes of Accidents.	1st Dist.	2d Dist.	3d Dist.	4th Dist.	5th Dist.	6th Dist.	7th Dist.	8th Dist.	9th Dist.	10th Dist.	11th Dist.		12th Dist.		Total.		Percentage.	
	Inside.	Outside.	Inside.	Inside.	Inside.	Inside.	Inside.	Inside.	Inside.	Inside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.	Inside.	Outside.
By falls of coal, .....	20	9	8	8	7	5	8	4	6	2	3	22	21	102	59	31	59	31
By falls of slate and roof, .....	58	42	15	15	20	9	37	14	24	3	22	14	13	273	11	12	23	51
By mine cars, .....	32	4	8	3	8	11	13	3	10	6	22	13	13	162	1	1	23	1
By machinery, .....	6	1	1	1	1	1	1	1	1	1	1	1	1	10	1	1	1	1
By explosions of gas and dust, .....	1	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1
By explosions of powder and dynamite, .....	3	1	1	2	2	1	1	1	1	2	1	1	8	13	2	2	2	2
By explosions of blasts, .....	3	1	1	1	2	1	1	1	1	2	1	1	1	11	1	1	1	1
By falling into shafts, .....	4	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
By falling from heights, .....	9	2	1	1	6	1	2	1	1	5	1	1	1	40	6	6	1	1
From miscellaneous causes, .....	136	6	50	2	45	29	69	27	41	21	53	53	59	635	21	100	38	19
Total, .....	136	6	50	2	45	29	69	27	41	21	53	53	59	635	21	100	38	19





I have arranged the nationalities of employes into two divisions or groups, the first comprising Americans, English, Welsh, Scotch, Irish and Germans. I include the latter, as the majority of them have had from twenty to thirty years experience in the mining of coal in this country. All the other nationalities are included in the second group.

The number in the first group in 1901 was 60,459, and in the second 57,143, making the total number employed in and about the bituminous mines 117,602.

Of the first group 126 were killed or fatally injured, while of the second group 175 persons lost their lives. The number of fatalities in the first group shows that 2,084 persons lost their lives for every 1,000 employed, while in the second group for every 1,000 employed 3,062 lost their lives.

If all the employes were of the second group, and the percentage of fatalities remained the same, 360 persons would have lost their lives instead of 301, the number of persons killed during the past year.

Had all the employes been of the first group and the percentage of fatalities remained the same, only 245 lives would have been lost.

This is a matter of speculation, as the enumeration of the employes of the various nationalities in and about the mines was never undertaken before 1900, and was continued in 1901. Thus, having the results of only two years as a guide, I am not prepared to say that my conclusions are absolutely correct, yet I am firmly of the opinion that more persons are and will be killed when men of 20 to 25 different nationalities are employed, than lose their lives in the coal mines in countries of the old world, where men of perhaps not more than 5 or 6 nationalities are employed.

Statement Showing Production of Bituminous Coal, Quantity of Explosives Used, Number of Tons of Coal Produced for Each Pound of Explosives, and Average Quantity of Coal Produced for Each Employe Inside of the Mines From 1892 to 1901 Inclusive.

Years.	Production of coal in tons.	Average number of tons produced per each employe inside	Number of pounds of black powder used.	Number of pounds of dynamite used.*	Average number of tons produced per pound of explosives used.
1892.....	46,225,552	702	2,696,450	.....	17.16
1893.....	43,422,498	622	3,004,425	.....	14.45
1894.....	39,800,210	541	2,918,875	.....	13.64
1895.....	51,813,112	726	3,731,700	.....	13.88
1896.....	50,273,656	702	3,639,650	.....	13.81
1897.....	54,674,272	736	4,318,425	73,874	12.44
1898.....	64,247,635	871	5,526,250	141,336	11.63
1899.....	73,066,943	975	6,660,700	222,076	10.62
1900.....	79,318,362	884	7,409,325	245,517	13.07
1901.....	80,914,236	846	7,851,500	639,801	9.47

\*Quantity of dynamite used was not reported until 1897.

Statement showing quantity of coal for each company that produced 700,000 tons or more, the inspection districts in the Bituminous regions in which such company's mines are located, and number of employees for each of these companies in 1900.

Names of Companies.	Number of Inspection Districts.	Number of employees.	
		Production of coal in tons.	Number of employees.
Pittsburgh Coal Co., .....	First, Fifth, Seventh and Ninth.	11,302,940	14,214
H. C. Frick Coal and Coke Co., .....	Second, Fifth and Ninth.	10,036,793	11,478
Rochester and Pittsburgh Coal and Iron Co., .....	Third and Fourth.	6,949,971	6,987
Monongahela River Consolidated Coal and Coke Co., .....	First, Seventh and Ninth.	4,744,774	8,001
Berwind-White Coal Mining Co., .....	Fourth, Sixth and Eighth.	4,608,981	5,847
New York and Cleveland Gas Coal Co., .....	Second.	1,447,839	1,648
Westmoreland Coal Co., .....	Second.	1,270,766	1,274
Washington Coal and Coke Co., .....	Fifth.	1,055,522	1,081
Northwestern Mining and Exchange Co., .....	Fourth.	950,236	1,786
Asia Coal Co., .....	First.	788,678	662
Cambria Steel Co., .....	Sixth.	785,825	836
Oliver and Snyder Steel Co., .....	Fifth.	715,975	744
Total, .....	.....	43,828,745	53,511

The above twelve companies produced 55.25 per cent. of the total tonnage of bituminous coal, and employed 49.69 per cent. of the total number of all the employees.

Number and percentage of each class of fatal accidents that occurred in and about the Bituminous coal mines from 1892 to 1901 inclusive.

Causes of Accidents.	1892.										Grand Total.	Percentage.
	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.		
By falls of coal, slate and roof, .....	82	115	54	102	115	110	142	163	170	186	1,280	70.32
By mine cars, .....	27	14	20	28	22	20	21	37	39	48	276	14.85
By explosions of gas, .....	1	1	1	4	19	2	15	29	8	28	103	5.65
By explosions of powder and blasts, .....	2	2	3	5	1	4	1	7	9	8	46	2.53
By falling into shafts and slopes, .....	1	1	4	1	1	1	1	3	6	1	17	0.93
By machinery, .....	1	1	1	1	1	1	1	1	1	2	17	0.93
By mules, .....	1	1	1	1	2	2	2	5	6	7	45	2.41
By electric shocks, .....	2	4	1	1	2	2	4	5	6	7	45	2.41
By suffocation, .....	5	3	3	1	5	2	1	4	11	6	45	2.41
From miscellaneous causes, .....	128	129	124	148	169	142	187	248	252	290	1,829	100.00
Total accidents inside, .....	4	2	4	4	6	1	6	3	10	5	41	53.94
By cars, .....	1	1	1	2	2	2	2	1	2	2	11	14.48
By machinery, .....	1	1	1	1	1	1	1	1	1	1	11	14.48
By suffocation, .....	1	1	1	1	2	3	3	4	2	4	17	22.63
From miscellaneous causes, .....	6	2	2	7	10	7	11	10	12	11	76	98.52
Total accidents outside, .....	6	2	2	7	10	7	11	10	12	11	76	98.52



Number of gaseous and non-gaseous mines, number of foremen, assistants and fire-bosses, production from gaseous and non-gaseous mines and percentage of production from each in the Bituminous region for 1900.

Districts.	Number of gaseous mines in each district.		Number of foremen and assistant foremen in gaseous mines.	Number of fire bosses.	Number of non-gaseous mines in each district.		Number of foremen and assistant foremen in non-gaseous mines.	Production in tons from gaseous mines.	Production in tons from non-gaseous mines.	Percentage of production from gaseous mines.		Percentage of production from non-gaseous mines.	
	First.	Second.			Third.	Fourth.				Fifth.	Sixth.	Seventh.	Eighth.
	35	53	63	73	25	68	25	7,113,928	1,540,353	82.20	17.79	82.20	17.79
	41	63	68	68	57	78	41	8,713,182	4,965,017	61.06	38.93	61.06	38.93
	.....	.....	.....	.....	80	78	78	.....	4,923,877	.....	.....	.....	.....
	.....	.....	.....	.....	70	52	52	2,440,323	5,758,104	29.77	70.22	29.77	70.22
	35	5	5	63	63	60	60	6,185,084	3,775,189	62.00	37.91	62.00	37.91
	6	13	11	11	121	132	132	1,461,675	9,292,951	13.10	86.89	13.10	86.89
	41	41	68	68	24	24	24	5,522,245	1,411,311	79.04	20.95	79.04	20.95
	1	1	1	1	114	114	114	115,558	4,296,648	2.66	97.33	2.66	97.33
	27	37	57	57	27	27	27	4,824,566	2,716,788	63.72	36.27	63.72	36.27
	.....	.....	.....	.....	85	89	89	.....	4,330,572	.....	.....	.....	.....
Total and percentage, .....	201	253	329	329	666	642	642	36,347,532	48,970,830	45.82	54.17	45.82	54.17

Production of coal in tons in the Bituminous mines from 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First, .....	4,299,437	4,476,397	5,282,181	5,529,951	6,697,611	6,459,200	8,909,229	9,295,646	8,654,281	8,108,658
Second, .....	3,023,514	3,624,093	4,497,623	4,198,787	7,364,771	9,123,707	9,820,673	12,077,460	13,648,199	8,222,733
Third, .....	3,906,514	3,924,129	4,641,120	3,254,937	3,243,851	3,400,392	3,761,085	4,230,662	4,923,577	5,604,079
Fourth, .....	3,606,142	4,550,122	4,296,566	9,224,351	5,772,765	6,541,943	7,516,941	7,246,941	8,199,727	5,892,779
Fifth, .....	7,300,101	3,629,559	3,908,348	6,423,892	4,979,410	6,501,545	7,754,835	8,872,514	9,960,273	7,294,453
Sixth, .....	7,399,158	3,140,284	2,881,088	4,466,750	4,722,873	5,101,611	7,161,333	8,594,067	10,694,627	6,848,954
Seventh, .....	5,897,942	4,435,416	2,438,875	4,693,508	5,634,825	5,060,375	5,943,567	6,489,157	6,831,576	8,226,705
Eighth, .....	6,811,735	5,043,478	3,454,078	4,709,922	3,819,442	3,798,138	3,352,840	4,476,814	4,312,176	3,383,284
Ninth, .....	.....	4,814,178	4,690,811	5,652,813	5,210,992	5,074,385	6,625,738	7,897,490	7,571,754	9,144,543
Tenth, .....	.....	2,772,116	1,882,530	2,778,271	2,837,056	3,261,976	3,401,251	3,886,762	4,290,372	5,022,343
Eleventh,* .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,172,343
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,113,892

\*Two additional bituminous districts were created in 1901.



Production of Bituminous coal in tons by counties from 1892 to 1901, inclusive.

Counties.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Allegheny.	7,327,370.15	6,891,549	6,415,611	7,146,899	7,853,414	7,122,227	9,079,101	9,978,730	10,313,939	11,218,921
Armstrong.	348,594.15	390,292	317,753	294,153	296,577	353,149	294,352	1,087,356	1,290,039	1,686,075
Beaver.	288,769	300,346	337,753	294,562	296,577	353,149	294,352	1,087,356	1,290,039	1,686,075
Bedford.	288,769	300,346	337,753	294,562	296,577	353,149	294,352	1,087,356	1,290,039	1,686,075
Blair.	278,495	400,416	288,753	439,894	319,575	353,149	294,352	1,087,356	1,290,039	1,686,075
Bolton.	53,317	40,739	26,474	57,711	52,467	41,588	32,708	115,701	251,597	24,012
Bridford.	132,040.50	160,443	134,334	220,865	223,415	227,439	161,224	31,835	32,065	32,351
Buckhannon.	3,289,194	3,377,459	3,005,261	4,401,929	4,892,078	5,271,721	6,504,459	7,272,644	11,580,453	8,614,492
Cambridge.	772,431.61	1,259,351	174,548	303,813	445,968	406,452	568,128	872,771	997,829	812,989
Centre.	788,873.25	772,622	401,088	428,675	564,782	581,726	266,476	270,956	306,985	376,439
Charlton.	6,631,013.18	6,081,324	4,156,310	5,442,299	4,589,733	3,392,472	4,885,750	5,890,337	2,819,119	5,232,154
Chatham.	42,212	94,582	100,000	94,692	134,568*	157,388	196,226	221,690	288,881	206,228
Clinton.	7,791,330	6,175,878	515,070	602,428	736,669	765,170	13,060,756	14,765,844	15,033,277	1,231,200
Elk.	756,632.19	6,175,845	6,084,153	10,124,341	8,732,371	10,112,944	873,118	873,118	15,033,277	15,475,041
Fayette.	350,065	291,729	187,070	283,092	333,669	283,676	289,059	357,106	367,243	387,463
Huntingdon.	628,297	3,072,997	3,072,997	4,336,575	4,336,575	4,336,575	6,148,969	6,148,969	6,148,969	6,148,969
Indiana.	3,072,997	3,072,997	3,072,997	4,336,575	4,336,575	4,336,575	6,148,969	6,148,969	6,148,969	6,148,969
Jefferson.	117,720	107,277	137,431	222,599	198,666	106,560	186,024	191,224	177,897	107,850
Lawrence.	17,000	53,192	80,160	83,829	82,739	91,735	98,118	191,224	98,064	107,093
Lycoming.	31,658	19,484	19,844	38,267	56,189	47,022	29,621	25,435	27,618	15,872
Marshall.	442,632.75	486,049	297,662	502,845	502,317	426,202	330,582	476,618	528,557	587,544
Monroe.	423,179	487,770	434,188	521,995	621,980	1,166,327	1,720,662	2,636,199	4,263,239	3,868,738
Summers.	90,538	90,538	90,538	90,538	90,538	90,538	90,538	90,538	90,538	90,538
Sullivan.*	942,252	942,252	694,627	781,814	806,658	925,893	917,026	621,391	922,701	859,077
Tioga.	2,796,941	2,414,444	3,373,478	3,410,694	4,266,518	3,761,284	4,661,189	4,779,097	4,884,828	5,622,593
Washington.	8,606,964.35	7,382,346	1,739,680	10,325,245	8,666,705	10,127,165	11,475,881	14,139,423	14,872,546	16,109,709
Westmoreland.	46,576,576.11	43,421,493	38,000,290	55,813,112	59,273,656	54,674,322	64,247,635	773,066,943	79,318,382	80,914,226
Total.										

\*Since 1894 in anthracite region.  
 \*26,775 tons of coal production of small mines not under provisions of law.



## Production of coke in tons by counties from 1892 to 1901, inclusive.

Counties.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Allegheny, .....	12,000	3,000	6,000	5,000	250	4,500	525	.....	1,000	6,000
Armstrong, .....	.....	6,556	.....	.....	.....	.....	.....	.....	.....	.....
Beaver, .....	.....	100	80	.....	.....	.....	.....	.....	.....	.....
Baldwin, .....	25,576	3,000	6,016	40,420	39,201	.....	30,708	51,636	101,546	67,887
Blair, .....	194,117	39,361	8,249	28,700	36,343	38,504	30,680	17,932	72,599	72,323
Bradford, .....	.....	.....	42,747	142,047	16,456	263,474	.....	.....	.....	.....
Cambria, .....	217,888	122,910	.....	.....	.....	.....	265,282	313,454	318,228	302,342
Centre, .....	27,679	152,303	13,069	.....	.....	.....	.....	.....	.....	.....
Clearfield, .....	105,508	131,300	45,574	117,830	157,756	101,040	173,108	277,722	155,471	116,379
Elk, .....	17,181	29,421	\$ 257	.....	.....	.....	.....	277,223	155,471	.....
Payette, .....	4,298,827	2,011,054	3,426,791	5,393,887	3,632,597	4,551,918	5,600,269	6,421,574	6,276,854	7,023,891
Huntingdon, .....	1,604	21,103	.....	.....	.....	.....	.....	3,750	.....	.....
Indiana, .....	40,254	33,029	5,250	7,172	22,758	16,339	15,712	48,760	68,303	2,646
Jefferson, .....	894,404	256,473	219,655	276,578	407,865	445,043	619,721	535,427	536,299	504,849
Somerset, .....	11,745	9,351	5,027	6,862	9,086	.....	14,937	23,971	21,799	13,549
Tioga, .....	1,053	384	450	576	1,022	476	503	.....	.....	.....
Washington, .....	.....	.....	.....	.....	7,200	.....	.....	.....	.....	.....
Westmoreland, .....	2,026,455	1,700,890	1,977,228	2,956,948	2,673,291	2,725,636	3,351,325	4,548,121	4,692,243	4,935,782
Total, .....	7,854,439	5,479,297	5,724,244	\$ 922,380	6,613,253	\$ 5,321,291	10,171,929	12,192,570	12,185,112	13,125,156

Number of employes in and about the Bituminous coal mines from 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First, .....	9,382	10,114	11,175	11,086	10,977	10,665	9,729	9,880	10,942	10,195
Second, .....	12,294	10,993	12,148	11,195	11,049	12,272	12,501	14,758	17,552	11,617
Third, .....	6,297	6,112	6,734	6,211	5,964	6,131	6,538	6,181	7,650	8,811
Fourth, .....	6,537	8,293	9,036	8,578	8,858	9,581	9,861	9,680	10,883	9,581
Fifth, .....	10,361	6,663	7,619	8,389	7,524	8,650	9,321	10,448	13,867	11,022
Sixth, .....	12,341	6,353	6,941	7,081	8,019	8,666	10,488	11,611	14,879	10,066
Seventh, .....	10,619	9,398	9,844	9,878	10,504	9,393	9,636	8,490	10,045	10,768
Eighth, .....	11,217	8,753	8,760	8,771	7,475	8,285	8,812	8,440	6,339	6,111
Ninth, .....	.....	8,753	8,760	8,771	8,775	8,285	8,812	8,440	6,339	6,111
Tenth, .....	.....	5,697	5,247	5,698	5,589	5,463	5,653	5,778	7,401	7,177
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	78,789	81,350	86,186	84,104	83,796	86,482	87,802	91,440	109,018	117,602

Number of employes in and about the mines of the Bituminous region by counties from 1892 to 1901, inclusive.

Counties.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
Allegheny.	13,447	14,351	15,345	15,022	14,732	14,295	14,452	13,160	15,061	14,912
Armstrong.	740	622	1,204	1,139	1,100	917	1,347	1,423	2,465	2,483
Beaver.	467	253	495	462	476	417	473	451	461	442
Bedford.	1,071	1,071	1,071	862	878	802	915	975	1,112	1,200
Blair.	627	596	707	788	728	516	506	297	510	508
Bradford.	122	83	90	109	115	127	75	68	66	57
Bucks.	235	228	461	489	500	500	426	341	513	659
Cambria.	5,672	6,601	7,048	7,219	8,237	8,918	9,284	9,782	17,652	14,152
Centre.	729	2,416	617	672	773	664	996	1,165	1,267	1,247
Clarion.	1,485	1,626	1,621	842	828	1,185	575	518	735	82
Clearfield.	10,629	10,933	9,733	9,416	8,989	9,016	7,947	8,022	4,127	9,202
Clinton.	173	180	151	198	211	236	206	235	254	371
Elk.	1,243	1,332	1,267	1,693	1,277	1,245	1,367	1,786	1,949	2,171
Fayette.	11,921	11,135	12,566	13,387	12,270	13,802	14,363	15,638	18,251	21,152
Huntingd'n.	668	630	689	639	701	595	690	723	735	741
Indiana.	1,021	873	700	707	701	673	690	733	1,791	1,760
Jefferson.	5,974	4,254	6,342	6,572	5,672	6,495	7,578	7,029	7,715	7,353
Lawrence.	267	267	344	344	344	344	344	344	344	344
Lebanon.	118	118	166	164	166	190	193	203	200	225
McKean.	41	39	42	86	94	95	70	53	51	50
Mercer.	1,112	1,010	1,136	1,118	1,222	1,058	938	732	918	970
Somerset.	554	677	1,865	618	860	1,499	2,671	3,771	5,672	5,245
Sullivan.	337	337	337	337	337	337	337	337	337	337
Tioga.	2,121	2,270	2,207	2,085	1,988	2,089	2,207	1,940	2,024	2,211
Washington.	5,502	7,110	6,198	6,835	7,305	6,522	5,299	5,253	6,971	6,971
Westmoreland.	13,083	13,016	14,570	14,203	13,389	14,270	14,519	16,615	18,897	21,869

List of fatal accidents that occurred in and about the Bituminous coal mines from the year 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First, .....	24	25	25	25	44	22	42	44	37	41
Second, .....	27	14	18	32	26	21	20	36	56	29
Third, .....	2	3	9	7	8	10	3	8	6	7
Fourth, .....	9	5	11	14	28	8	15	21	21	13
Fifth, .....	23	12	13	13	18	25	14	50	40	41
Sixth, .....	14	12	13	8	11	25	22	28	30	18
Seventh, .....	25	21	9	18	22	22	26	28	23	35
Eighth, .....	11	20	13	13	6	7	7	11	9	3
Ninth, .....	15	15	11	20	19	19	28	23	21	41
Tenth, .....	4	4	2	5	4	7	11	9	21	8
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
Total, .....	133	131	124	155	179	149	198	258	264	361



List of non-fatal accidents that occurred in and about the Bituminous coal mines from 1892 to 1901, inclusive.

Districts.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.
First, .....	87	77	101	66	123	89	109	114	144	112
Second, .....	41	28	39	69	31	32	66	42	56	82
Third, .....	26	25	12	23	17	24	22	21	58	41
Fourth, .....	14	42	29	22	49	27	62	58	50	44
Fifth, .....	21	14	17	19	38	20	39	33	56	45
Sixth, .....	14	14	17	19	38	20	39	33	38	31
Seventh, .....	56	44	47	52	49	58	66	64	72	73
Eighth, .....	31	31	17	34	36	29	22	24	27	23
Ninth, .....	77	35	49	40	41	33	56	43	37	42
Tenth, .....	.....	.....	.....	.....	.....	18	27	38	50	21
Eleventh, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
Twelfth, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
Total, .....	393	346	357	419	398	425	458	487	583	656

Classification of employees who were killed or fatally injured in and about the Bituminous mines from 1892 to 1901, inclusive.

Years.	Inside Employees.						Outside Employees.					
	Mine foremen.	Miners.	Laborers.	Company men.	Drivers and runners.	Doorboys and helpers.	Total inside.	Blacksmiths and carpenters.	Engineers and firemen.	Company men.	Total outside.	Grand total.
1892.	1	100	9	5	11	4	133	.....	3	.....	3	133
1893.	1	114	5	2	6	1	131	.....	1	1	2	133
1894.	.....	89	5	4	12	1	111	.....	.....	.....	.....	113
1895.	1	130	25	5	20	1	164	.....	1	2	3	167
1896.	1	126	26	12	16	1	185	1	.....	4	6	193
1897.	3	117	10	7	14	1	145	.....	.....	1	1	148
1898.	.....	135	20	29	11	3	198	.....	1	1	3	200
1899.	3	174	12	48	17	3	251	.....	4	.....	4	255
1900.	4	200	9	15	20	.....	251	.....	3	10	13	264
1901.	6	202	7	44	25	2	280	.....	.....	11	11	291



Fatal Accidents per Each 1,000 Employees in and About the Bituminous Coal Mines, and Tons of Coal Mined for Each Fatal Accident From 1884 to 1901, Inclusive.

Years.	Employees.	Fatal accidents.	Fatal accidents per 1,000 employees.	Number of tons of coal mined.	Number of tons mined for each fatal accident.
1884, .....	39,994	105	2.625	20,553,090	195,743
1885, .....	44,145	72	1.630	24,030,919	333,763
1886, .....	51,846	81	1.562	28,607,173	353,175
1887, .....	57,774	103	1.783	33,992,630	329,146
1888, .....	61,564	89	1.445	33,832,285	380,388
1889, .....	55,600	165	1.888	34,625,439	329,763
1890, .....	66,831	146	2.183	40,740,521	279,615
1891, .....	74,166	236	3.182	41,831,456	177,252
1892, .....	78,784	133	1.688	46,225,552	347,760
1893, .....	79,854	131	1.640	43,422,495	331,499
1894, .....	86,177	124	1.441	39,800,210	324,194
1895, .....	84,904	155	1.825	51,813,112	334,278
1896, .....	83,796	179	2.136	50,273,656	280,858
1897, .....	86,483	149	1.723	54,674,272	366,941
1898, .....	87,822	198	2.255	64,247,635	323,483
1899, .....	91,440	238	2.601	72,866,943	306,429
1900, .....	109,018	265	2.430	79,318,362	301,311
1901, .....	117,602	301	2.559	80,914,236	268,888

### A BOON TO MINING INTERESTS.

In the interest of employees in gaseous mines who use explosives to bring down the coal and whose lives are endangered by explosions of gas, also in the interest of operators whose mines are dry and gaseous, and who naturally are in constant dread of explosions and mine fires resulting from them, I publish the following statement of an improved cartridge, the use of which I feel assured will do much to avert the danger from such explosions and fires:

From what I have heard of the efficiency of the Safety Blasting Cartridge, I deem it a boon to those engaged in the mining of coal, and think it my duty to call the attention of those in charge of mines to its advantages. I hope that its adoption will be the means of decreasing the loss of life and destruction of property from explosions of gas, and mine fires.

While I have not personally witnessed any tests of this new device, I append some testimonials from men who are experts on the subject and whom I know to be truthful and disinterested.

#### Description.

This cartridge is composed of an inner and an outer tube made of specially prepared material with the intervening space between the inner and outer tube filled with water; it is made in a number of sizes to meet the various requirements to produce the desired results.



The method of its preparation is simple and easy, rendering it feasible to place in the hands of anyone for use. The explosive is placed in the small or inner tube, with the firing wires adjusted to protrude, and the tube is firmly corked; this loaded tube is then placed in the larger tube and the entire surrounding space is filled with water. The firing wires are carried through the cork inserted in the outer tube which is firmly driven home, and the cartridge is then ready for the shot hole. This cartridge is adapted for use with either firing wires, fuse or squibs.

The efficiency of the cartridge in action is perfect, there being no flame, flash or spark.

At the moment of explosion every vestige of fire is instantly destroyed and the danger from secondary explosions, whether in gaseous or dry mines is entirely eliminated, regardless of how hazardous the conditions may be.

In consequence of the water acting as a cushion or "tamp," much of the dangerous tamping is unnecessary, and as a greater lateral force is exerted by the same given quantity of explosive, the output of each blast is fully twenty per cent. more than is produced by the present method, and in addition there is no excessive shattering.

The cartridge prevents the miner from using more of the explosive than he is allowed, thus preventing injury to the walls and roof of the mine by overcharging in blasting.

We claim for this cartridge and can substantiate such claim from actual practice, that there is no danger of loss of life or injury to the miner, and the property of the mine owner is thoroughly protected from loss or damage.

The following endorsements from mine Inspectors, managers and mine foremen may be interesting, as they recommend its perfection of action under the most trying conditions and advise its use for reasons both of safety and economy:

"Connellsville, Fayette Co., Pa.,  
August 22, 1901.

"National Safety Cartridge Co.,

"Betz Building, Philadelphia:

"Gentlemen: I had the pleasure of testing on the 17th and 18th inst. six flameless cartridges at the Continental No. 1 Mine in this county. The mine is 321 feet deep and is a gaseous one. I had the best possible opportunity of seeing if there would be any flame when the blast exploded and I had also three of my best men with me.

"We stood about 200 feet in a straight line from the locality of the blasts and looking directly at them, and none of us detected any flame. Having had 34 years experience in mines and in handling explosives, I can truthfully say that these cartridges are a godsend to

the men who are toiling under ground, as their greatest dread is explosions, and I cannot too highly recommend their use in all mines where blasting is done.

“Respectfully,

“ALFRED C. JONES, Mine Foreman.”

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“The Thomas Coal Company,  
Kehley’s Run Colliery,  
Shenandoah, Pa.

“National Safety Cartridge Co.,  
“Betz Building, Philadelphia:

“Dear Sirs: After making a thorough test of your patent Flameless Cartridge I can cheerfully recommend it as doing all you claim for it. It is an excellent thing for gaseous mines to prevent explosions, and mine fires in very dry mines, and is the best device that has ever come under my notice.

(Signed) “THOMAS BAIRD, Superintendent,  
“The Thomas Coal Co.”

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“Second Bituminous Inspection District,  
“C. B. Ross, Inspector,  
“Greensburg, Pa., Nov. 15, 1901.

“National Safety Cartridge Co.,  
“Betz Building, Philadelphia:

“Gentlemen: On the above date at the No. 2 Mine of the Penn Gas Coal Company located near Irwin, Pa., a test was made with your safety cartridge.

“In making the test, dynamite was used in the cartridge and when the blasts exploded neither flame nor spark could be seen. The gas which was being given off very freely at the face, was not ignited by the blasts, which proved conclusively that the test was a complete success.

“In my opinion, the use of the cartridge in combination with dynamite as an explosive, for bringing down coal in mines where blasting is necessary, will not only do the work successfully, but it will reduce the liability of danger from mine fires which so frequently occur from blasting in the ordinary way, to a minimum.

“Respectfully yours,

(Signed) “C. B. ROSS,  
“Mine Inspector.”

"Fifth Bituminous Inspection District,  
"Uniontown, Fayette Co., Pa.,  
"November 20, 1901.

"National Safety Cartridge Company:

"Gentlemen: I fully tested the Safety Cartridges which you left with me and I fully concur with Mr. C. B. Ross, Inspector, in his opinion and endorsement of the cartridge, as, if it is put into general use, it will do much to prevent the loss of life and destruction of property from fires which now occur from 'blown out shots' and ignition of gas, which have entailed great loss upon the owners of mines.

"Yours, &c.,  
(Signed) "ISAAC G. ROBY,  
"Inspector Fifth Bituminous District."

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"Lincoln Mines,  
"Fayette Co., Pa., No. 22.

"National Safety Cartridge Co.,  
"Betz Building, Philadelphia:

"Gentlemen: I was much pleased with the results of the test made by you to-day in the Lincoln Mines, owned by Messrs. A. L. Kiester & Co., of your water cartridge. Absolutely no flame was caused by the explosion of dynamite in the water cartridge used, and very little smoke.

"I am of the opinion that the use of your cartridge will be conducive to the health and safety of those engaged in mining operations.

"Yours very truly,  
(Signed) "CHAS. CONNOR,  
"Ex-Mine Inspector."

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"Oliver, Fayette Co., Pa.,  
"December 23, 1901.

"National Safety Cartridge Co.,  
"Betz Building, Philadelphia:

"Gentlemen: I was present at the firing of your Patent Water Cartridge in our Oliver No. 1 Mine on December 21st. I saw no sign of flame either at time of explosion or after.

"I think the cartridge will be a valuable addition to the present system of firing, and would think that it would be the means of preventing many disastrous accidents.

"We shall certainly adopt it in all gaseous places.

"Yours very truly,  
(Signed) "FRED. C. KEIGHLEY,  
"General Superintendent,"

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# ANTHRACITE MINE DISTRICTS.

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# First Anthracite District.

(LACKAWANNA, SUSQUEHANNA AND WAYNE COUNTIES.)

Scranton, Pa., March 5, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of herewith transmitting my report as Inspector of Mines for the First Anthracite District for the year ending December 31, 1901.

The total production of coal was 7,728,344 tons, an increase of 1,359,396 tons over that produced during the preceding year. The average number of days worked was 198.7 against 161.5 in 1900.

There were 18,733 persons employed which is an increase of 1,448 over those of the year 1900.

To produce this quantity of coal 262,080 kegs of powder and 204,959 pounds of dynamite were used. The number of fatal accidents was 58, eighteen more than occurred the previous year, and the number of non-fatal ones was the same. The number of wives made widows was 29, and 52 children under fourteen years of age were left fatherless. The number of tons produced per life lost was 133,247 and 43,911 tons produced per accident.

There were but two accidents whereby more than one person was killed at one time, two happened in the same mine. In one case two men were killed by a large bell-shaped rock falling on them while they were on their way back to the face of their chamber after a blast. In the other a car jumped the track coming down a grade and dislodged several props, and while replacing these, after an examination of the roof had been made by the assistant mine foreman, it fell, and killed the four men engaged, including the assistant foreman, who was a very careful, competent and trustworthy man, but in this case his judgment erred.

To falls of rock and coal and mine cars are attributed 44, or 75.86 per cent. of the fatal accidents, thirty-three to the former and eleven to the latter, thus showing that as in former years these are the most prolific causes of fatalities. With the exception of the six deaths already noted, the other twenty-seven occurred close to the "working faces," and in many cases shortly after the men had resumed operations, after an unsuccessful effort to pry down what appeared to them to be a bad looking piece of roof or coal.

After considerable effort to pull down these pieces, and failing to accomplish their object at the time, they finally before "going up," are convinced that "it is not as bad as they first thought it was," and with this confidence, again resume their work, not always, however, without placing a prop or two under it "for fear it will come."

This, while a good practice, is not always a sure one, as I have frequently found upon investigation, evidence similar to this. "We had a drill, and sometimes it is two drills, over that slab, but it would not come, or we could not pull it, so we then decided to put up a prop or two under the thick part of it, but we did not see that seam." In these cases it is not always convenient or advisable to double timber the roof, and propping is the next easiest thing to do, and is frequently resorted to in preference to the more difficult though infinitely safer precaution of blasting down the "suspicious places." Hence, to avoid a great number of accidents from falls of this kind, I would earnestly urge upon all miners not to work under a piece of roof if once their judgment has led them to think it unsafe, and which they have failed with one or even two drills to pry down, and recommend that it be blasted down, as the only safe and reliable measure to adopt. I am convinced by close observation, that if the miners would at all times be governed by this suggestion, and never allow any false sense of security to lead them to cease their efforts until the "suspicious piece" is down, it would go a long way toward reducing the number of fatalities each year.

The reckless indifference to danger on the part of the drivers in jumping on and off cars, and the most dangerous of all their practices, that of sitting on the bumper of swiftly moving cars, and at the same time sliding their feet along the rail is characteristic of nearly all drivers, and they do not realize the great danger attending it. It is a practice that each year since the long bumpers on mine cars came into use, has destroyed the lives of several young boys, and I urgently recommend that each mine foreman take a more active interest in the welfare of the driver boys, and adopt stringent rules to prevent this, and instruct their assistants, especially the driver bosses, to strictly enforce them, which I am sure will have a wholesome effect.

The remaining fourteen deaths are due to ten different causes, as will be seen by consulting table giving causes of accidents.

The condition of the mines on the whole is satisfactory. In many of them the whole output is obtained from pillars which are being "robbed," previous to abandonment. The work is dangerous, and much more so in some mines than in others, but in every case suitable recommendations have been made to secure the greatest degree of safety. While "cogging" for the purpose of trying to prevent a "squeeze," which is caused by the removal of pillars, from "spreading" in the Glenwood shaft, in May last, a larger and more sudden

"fall" occurred than was expected, and the men who had retreated a considerable distance out of the gangway, but not far enough, were blown with great violence along the gangway by the wind caused by the cave, one with such force against the "rib" as to fracture his skull and cause his death. Aside from this there were no other fatalities due to falls brought on by "robbing."

Several of the mines in this district were flooded last spring, and one of them, the Glenwood, did not resume operations for seven months. To prevent, if possible, any recurrence of the damage by flood, several large new pumps have been installed by the Delaware and Hudson, and Hillside Coal and Iron Companies.

The law requiring medical rooms has been generally complied with, and in many cases large, convenient and comfortable brick or stone rooms have been provided, which are supplied with all that the law requires.

Together with the enforcement of this law, a suggestion was made to several of the superintendents to further add to the comfort of those who might be unfortunate enough to be injured, by adopting some suitable means of comfortably heating the ambulances in winter, to which many of the superintendents cheerfully complied.

Following is a copy of a letter sent to every superintendent in the district with reference to the above:

"Scranton, Dec. 16, 1901.

"Mr. \_\_\_\_\_,

Superintendent:

"Dear Sir: Since a law requiring a medical room in all mines is in force, I desire to further submit for your consideration a suggestion along the same line, with a view of adding to the comfort of injured persons who may have to be conveyed either to their homes or hospitals in ambulances in the winter.

"It is that you provide some suitable heating apparatus that will keep the ambulance at a comfortable temperature while the person is being conveyed to his destination.

"The suggestion has been made to all those in charge of mines in this district, and all look upon it with favor, and trusting you will do the same.

"Respectfully yours, etc."

The report contains the usual tables descriptive of all fatal accidents. Tables of statistics. Also a table showing from the monthly reports of the mine foremen the volume of air in circulation; also the names of the successful applicants for mine foremen and assistant mine foremen.

All of which is most respectfully submitted.

EDWARD RODERICK,  
Inspector.



TABLE A—Total Production in Tons During the Year 1901.

Delaware and Hudson Company, .....	2,926,366
Temple Iron Company, .....	915,857
Scranton Coal Company, .....	962,375
Hillside Coal and Iron Company, .....	944,747
Pennsylvania Coal Company, .....	333,345
Delaware, Lackawanna and Western Railroad Company, .....	609,309
Price Pancoast Coal Company, .....	338,653
Dolph Coal Company, .....	208,692
Riverside Coal Company, .....	135,355
Moosic Mountain Coal Company, .....	115,048
Mt. Jessup Coal Company, .....	92,779
Carney & Brown Coal Company, .....	75,335
Clark Tunnel Coal Company, .....	35,881
Black Diamond Coal Company, .....	29,563
W. L. Barton Coal Company, .....	5,039
<b>Total, .....</b>	<b>7,728,344</b>

Total production was made up as follows:

Shipments by railroad to market, .....	7,107,980
Sold at mines for local use, .....	100,466
Consumed to generate steam, .....	519,898
<b>Total, .....</b>	<b>7,728,344</b>

TABLE B—Number of Fatal Accidents and Tons of Coal Produced per Accident.

Names of Companies.	Number of fatal accidents.	Number of tons produced per accident.
Delaware and Hudson Company, .....	19	154,019
Temple Iron Company, .....	9	101,762
Scranton Coal Company, .....	7	137,482
Hillside Coal and Iron Company, .....	9	472,373
Pennsylvania Coal Company, .....	3	111,115
Delaware, Lackawanna and Western Railroad Company, .....	4	152,225
Price, Pancoast Coal Company, .....	5	67,730
Dolph Coal Company, .....	2	104,346
Riverside Coal Company, .....	2	67,677
Moosic Mountain Coal Company, .....	1	115,148
Mt. Jessup Coal Company, .....	2	46,349
Black Diamond Coal Company, .....	1	29,563
Clark Tunnel Coal Company, .....	1	35,881
<b>Total and averages, .....</b>	<b>58</b>	<b>133,247</b>

TABLE C—Number of Fatal and Non-Fatal Accidents and Tons of Coal produced per Accident.

Names of Companies.	Number of accidents.	Tons produced per accident.
Delaware and Hudson Company, .....	58	50,455
Temple Iron Company, .....	17	53,874
Scranton Coal Company, .....	23	41,448
Hillside Coal and Iron Company, .....	9	104,972
Pennsylvania Coal Company, .....	10	33,334
Delaware, Lackawanna and Western Railroad Company, .....	20	30,485
Price, Pancoast Coal Company, .....	21	16,146
Dolph Coal Company, .....	5	41,738
Riverside Coal Company, .....	4	33,839
Moosic Mountain Coal Company, .....	1	115,048
Mt. Jessup Coal Company, .....	5	18,555
Black Diamond Coal Company, .....	1	35,881
Clark Tunnel Coal Company, .....	2	14,781
Totals and averages, .....	176	43,911

TABLE D.—Showing Occupations of Persons Killed or Injured.

Occupation.	Killed or fatally injured.	Injured.	Total.
Miners, .....	21	44	65
Laborers, .....	22	23	45
Culm Dumper, .....	1		1
Drivers, .....	5	18	23
Headmen, .....		2	2
Trackmen, .....		2	2
Slate pickers, .....	1	4	5
Timbermen, .....	1		1
Bratticemen, .....		2	2
Door boys, .....		2	2
Runners, .....	3	7	10
Sinkers, .....		6	6
Driver boss, .....		1	1
Loader (outside), .....	1		1
Assistant mine foreman, .....	1		1
Fire boss, .....		1	1
Motor boy, .....		1	1
Foot men, .....	1	1	2
Crusher boy, .....	1		1
Oilers, .....		1	1
Engineers, .....		1	1
Totals, .....	58	118	176

TABLE E.—Classification of Accidents.

Causes of Accidents.	Killed or fatally injured.		
	Killed.	Injured.	Total.
By falls of rock, .....	26	26	52
By explosions of blasts, .....	4	10	14
By cars (inside), .....	10	32	42
By concussion caused by cave, .....	1	.....	1
By falls of coal, .....	7	10	17
By falling from trestle, .....	1	1	2
By cars (outside), .....	1	7	8
By falling down shaft, .....	1	.....	1
By falling timber, .....	1	4	5
By machinery, .....	1	3	4
By explosions of dynamite, .....	2	.....	2
By explosions of gas, .....	1	18	19
By falling ice, .....	1	.....	1
By smothering in culm chute, .....	1	.....	1
By miscellaneous causes, .....	1	7	7
Totals, .....	58	118	176

TABLE F.—Nationalities of Persons Killed and Injured.

Nationalities.	Killed.		
	Killed.	Injured.	Totals.
American, .....	17	32	49
Poles, .....	9	22	31
Irish, .....	7	22	29
Slavs, .....	5	9	14
Italian, .....	8	4	12
English, .....	5	6	11
Hungarian, .....	12	8	10
Welsh, .....	13	7	10
Russian, .....	2	1	3
German, .....	.....	3	3
Austrian, .....	.....	1	4
Totals, .....	58	118	176

Table showing method of ventilating and quality of air in cubic feet per minute circulating in each mine.

Name of Mine.	Name of Operator.	Number of fans.	Diameter of fans.	Number of splits.	Number of persons employed in each split.	Number of Cubic Feet of Air Per Minute At			Average number of cubic feet of air per minute per person employed.
						Inlet.	Face of roadway.	Outlet.	
Leggitts Creek.	Bedaware and Hudson Co.,	3	20	1	46	53,000	30,240	25,600	517
				2	34	58,800	24,310	22,460	814
				3	2	30,600	old works	32,000	15,300
				4	24	36,220	37,500	38,700	1,612
				5	3	104,500	old works	170,480	31,832
				6	none	22,540	old works	27,000	
				7	none	19,800	old works	25,400	
				8	56	47,220	78,840	85,650	1,378
				9	32	39,155	39,700	40,300	1,530
				10	16	13,200	20,000	21,300	1,200
				11	53	110,300	51,000	113,200	1,961
				12	72	105,300	86,000	112,000	1,515
Meyers,	Bedaware and Hudson Co.,	2	50	1	70	35,420	31,600	41,000	788
				2	51	61,200	56,700	62,500	1,200
				3	70	67,500	57,500	67,800	1,231
				4	55	32,300	22,000	35,000	587
				5	72	54,000	34,100	55,100	1,046
				6	16	22,100	22,100	26,000	1,680
				7	70	10,340	16,745	21,270	387
				8	48	40,275	34,960	43,820	894
				9	12	25,400	20,225	30,275	2,146
				10	18	45,275	42,145	50,400	2,515
				11	40	30,100	28,200	34,275	1,303
				12	50	62,300	50,275	63,275	1,246
				13	70	62,575	58,000	67,100	1,251



Table showing method of ventilating and quantity of air in cubic feet per minute circulating in each mine—Continued.

Name of Mine.	Name of Operator.	Number of fans.	Diameter of fans.	Number of splits.	Number of persons employed in each split.	Number of Cubic Feet of Air Per Minute At			Average number of cubic feet of air per minute per person employed.
						Inlet.	Face of Runway.	Outlet.	
Eddy Creek, .....	Delaware and Hudson Co., .....	3	22	1	56	13,400	16,200	10,800	228
			20	1	46	20,000	18,000	21,300	433
			19	1	28	12,180	10,800	14,053	433
			19	1	18	8,460	8,000	9,300	2,800
			19	1	18	21,900	18,000	25,560	1,250
Olyphant, .....	Delaware and Hudson Co., .....	1	22	1	26	14,760	13,550	15,925	567
			20	1	32	15,265	14,400	16,200	477
			20	1	60	22,320	18,750	25,200	272
			20	1	44	21,600	18,000	21,150	490
			20	1	54	29,900	17,875	23,570	411
Grassy Island, .....	Delaware and Hudson Co., .....	2	20	6	42	18,630	15,975	19,680	443
			20	6	17	15,750	14,400	16,380	956
			20	8	38	15,265	14,400	16,200	401
			20	1	50	28,700	19,910	29,200	534
			20	1	25	17,000	21,340	20,270	481
White Oak, .....	Delaware and Hudson Co., .....	2	20	2	25	17,000	15,175	17,900	680
			20	4	20	30,000	27,860	30,265	1,500
			20	6	20	11,020	11,000	12,000	581
			20	6	15	11,000	10,300	12,120	733
			20	7	70	19,875	16,460	21,000	284
Natural, .....	Delaware and Hudson Co., .....	2	20	8	50	14,000	12,700	16,360	280
			20	9	20	12,780	11,390	15,000	630
			20	10	30	21,000	18,250	21,800	706
			20	1	32	29,250	14,400	32,510	886

Jermyn, .....	Delaware and Hudson Co., .....	1	20	75	42, 100	19, 500	43, 500	561
		2		75	35, 500	15, 000	37, 100	473
		3		74	28, 200	14, 500	30, 100	381
		4		67	19, 000	11, 500	20, 100	283
		5		70	20, 100	12, 500	20, 100	287
Powderly, .....	Delaware and Hudson Co., .....	1	17	25	12, 500	10, 925	14, 400	357
		2		68	11, 184	11, 184	11, 400	193
		3		29	11, 310	10, 800	11, 880	391
		4		42	11, 800	14, 200	14, 200	304
		5		66	18, 810	14, 354	19, 140	285
		6		29	10, 435	14, 400	14, 400	376
		7		18	11, 184	11, 320	14, 040	621
No. 1, .....	Delaware and Hudson Co., .....	Natural,		35	13, 000	12, 600	15, 600	433
		2		28	12, 000	11, 000	13, 000	428
		3		35	10, 000	9, 000	11, 000	758
		4		22	8, 000	8, 000	11, 000	750
		5		18	22, 000	22, 000	22, 000	880
		6		13	9, 000	11, 000	11, 000	500
		7		60	20, 000	19, 500	22, 500	333
		8		17	14, 000	13, 500	15, 000	823
Coal Brook, .....	Delaware and Hudson Co., .....	2	14	32	8, 200	7, 500	9, 460	255
		3	20	62	22, 500	19, 140	24, 750	362
		4		52	13, 000	11, 850	15, 150	261
		5		55	13, 600	12, 100	14, 400	247
		6		38	11, 750	11, 230	12, 110	309
		7		32	6, 800	6, 460	8, 220	244
		8		24	12, 310	12, 050	13, 210	215
		9		56	14, 500	13, 850	15, 100	215
		10		59	13, 130	13, 670	13, 700	262
				66	21, 000	19, 500	21, 000	332
Clinton, .....	Delaware and Hudson Co., .....	2	14	73	22, 598	21, 540	22, 702	309
		3		74	22, 460	21, 730	22, 300	298
		4		75	22, 800	22, 325	23, 468	304
		5		61	19, 602	19, 274	19, 596	322
		6		74	26, 042	25, 468	26, 300	351
		7		60	18, 208	17, 148	18, 606	303
				32	10, 872	10, 246	11, 148	333
Lackawanna, .....	Temple Iron Co., .....	2		40	25, 600	22, 285	26, 270	612
		3		75	28, 785	25, 380	28, 975	333
		4		75	21, 575	19, 575	22, 550	291
		5		63	21, 890	18, 500	23, 800	347
		6		28	24, 710	27, 410	27, 000	882
				35	27, 090	24, 910	28, 100	774

Table showing method of ventilating and quantity of air in cubic feet per minute circulating in each mine—Continued.

Name of Mine.	Name of Operator.	Number of fans.	Diameter of fans.	Number of splits.	Number of persons employed in each split.	Number of Cubic Feet of Air Per Minute At			Average number of cubic feet of air per minute per person employed.
						Inlet.	Face of Runway.	Outlet.	
Sterrick Creek, .....	Temple Iron Co., .....	2	20	1	75	22,190	14,320	23,760	215
					70	18,760	12,230	19,160	268
				2	20	6,160	5,260	7,200	305
				3	56	18,350	10,470	17,625	327
				4	74	26,215	17,965	27,200	354
				5	50	18,360	10,440	19,635	327
Edgerton, .....	Temple Iron Co., .....	Natural		1	9	24,300	20,100	28,130	2,700
				2	5	21,100	18,370	24,500	4,220
North West, .....	Temple Iron Co., .....	1	11	1	64	34,375	33,120	34,960	537
				2	65	31,510	27,735	31,555	531
				3	62	36,715	25,760	36,725	502
				4	47	24,435	22,160	24,430	519
				5	40	19,270	19,255	19,285	481
Richmond No. 4, .....	Seranton Coal Co., .....	1	26	3	.....	*	.....	.....	.....
Johnsons No. 1, .....	Seranton Coal Co., .....	1	35	1	69	25,300	19,000	26,000	421
				2	.....	23,700	18,600	23,500	450
				3	.....	6,000	.....	.....	.....
				4	.....	6,500	11 works	6,500	.....
				5	.....	13,100	13 works	13,000	.....
				6	.....	11,000	old works	11,000	.....
				7	.....	10,000	old works	10,000	.....

Johnsons No. 2, .....	Seranton Coal Co., .....	.....	.....	65	48,570	36,000	48,000	746
				75	31,500	.....	31,650	415
				70	20,400	11,625	25,600	261
				60	14,500	9,575	17,255	241
Ontario, .....	Seranton Coal Co., .....	1	18	64	14,500	10,000	.....	226
		1	20	50	12,375	9,700	29,500	217
		1	13	57	15,900	11,800	16,200	278
		1	12	46	11,800	8,100	12,600	258
		4	.....	35	14,600	8,100	15,100	224
		5	.....	33	13,500	7,200	12,600	335
		4	.....	38	10,500	6,700	11,800	376
		5	.....	38	19,650	6,700	20,200	328
		1	.....	45	23,000	16,300	24,600	311
Raymond, .....	Seranton Coal Co., .....	1	18	74	13,100	10,320	15,400	177
		1	.....	73	13,200	10,150	15,300	170
		3	.....	40	15,125	13,440	18,770	393
		4	.....	75	18,500	13,620	19,900	246
		3	.....	70	16,070	12,475	18,740	228
Richmond No. 3, .....	Seranton Coal Co., .....	1	24	46	12,150	87,380	46,580	916
		2	.....	74	27,410	24,250	31,870	370
Clifford, .....	Hillside Coal and Iron Co., .....	1	18	73	22,750	13,230	21,750	311
		3	.....	71	20,270	11,100	18,640	285
		3	.....	67	35,220	9,760	16,560	533
Forest City Slope, .....	Hillside Coal and Iron Co., .....	1	14	52	13,150	11,200	14,600	253
		1	.....	67	19,320	16,565	21,629	288
		3	.....	20	8,330	6,770	10,200	416
		4	.....	34	12,825	10,360	13,265	261
		5	.....	36	15,370	.....	17,570	426
Forest City No. 2, .....	Hillside Coal and Iron Co., .....	1	25	73	16,841	15,735	17,870	220
		2	.....	74	16,900	15,110	17,675	220
		3	.....	72	15,770	15,873	16,873	218
		4	.....	72	14,665	14,410	15,000	203
		5	.....	72	14,972	14,413	15,136	208
		6	.....	71	15,639	14,729	16,886	220
Erie, .....	Hillside Coal and Iron Co., .....	1	12	50	11,733	11,742	11,736	234
		1	.....	70	14,520	14,531	14,570	277
		1	.....	73	16,389	16,576	16,587	271



Table showing method of ventilating and quantity of air in cubic feet per minute circulating in each mine—Continued.

Name of Mine.	Name of Operator.	Number of fans.	Diameter of fans.	Number of splits.	Number of persons employed in each split.	Number of Cubic Feet of Air Per Minute At			Average number of cubic feet of air per minute per person employed.
						Inlet.	Face of Gangway.	Outlet.	
Keystone, .....	Hillside Coal and Iron Co., .....	Natural	.....	4	68	14,540	14,537	14,541	213
				5	50	11,410	11,414	11,412	228
Glenwood, .....	Hillside Coal and Iron Co., .....	1	.....	1	58	59,626	58,560	44,600	1,027
				2	28	28,120	27,640	20,000	1,015
				1	60	420,140	19,830	20,260	335
				2	60	19,830	19,140	17,310	330
No. 1 Shaft, .....	Pennsylvania Coal Co., .....	1	18	3	60	21,210	20,710	21,330	353
				4	60	21,140	20,830	21,200	352
				1	60	15,400	12,900	15,750	256
				2	22	14,550	12,170	11,300	256
No. 2 Shaft, .....	Pennsylvania Coal Co., .....	1	18	3	51	18,500	17,530	18,000	1,000
				4	31	12,000	11,600	15,000	1,114
				1	45	20,150	20,010	20,010	1,486
				6	45	26,340	14,000	26,350	55
Gipsy Grove, .....	Pennsylvania Coal Co., .....	1	18	1	69	16,335	11,335	27,925	236
				2	8	9,540	8,300	27,925	1,192
				3	51	18,500	16,460	33,270	304
				4	31	12,000	10,970	33,250	406
Gipsy Grove, .....	Pennsylvania Coal Co., .....	1	18	1	24	8,000	7,640	8,000	333
				2	37	14,000	12,500	17,000	378
				3	40	16,000	14,500	19,000	350
				4	30	13,000	12,400	13,000	280

[illegible]

Table showing method of ventilating and quantity of air in cubic feet per minute circulating in each mine—Continued.

Name of Mine.	Name of Operator.	Number of fans.	Diameter of fans.	Number of splits.	Number of persons employed in each split.	Number of Cubic Feet of Air Per Minute At			Average number of cubic feet of air per minute per person employed.
						Inlet.	Face of Gangway.	Outlet.	
Riverside, .....	Riverside Coal Co., .....	1	22	1	68	18,229	15,235	18,280	267
		.....	.....	2	44	14,320	13,615	14,510	315
		.....	.....	3	67	18,255	15,241	17,630	272
Moosic Mountain, .....	Moosic Mountain Coal Co., .....	1	16	1	50	15,230	10,020	13,510	314
		.....	.....	2	35	16,438	12,000	22,260	290
		.....	.....	3	38	13,510	11,980	17,550	356
Mt. Jessup, .....	Mt. Jessup Coal Co., .....	1	16	1	44	25,101	8,915	26,150	570
Murray, .....	Carney & Brown, .....	Natural	.....	1	28	13,838	9,894	13,128	493
		.....	.....	2	39	15,642	12,124	15,264	411
Black Diamond, .....	Black Diamond, .....	Natural,	##	.....	.....	.....	.....	.....	.....
Bartons, .....	L. W. L. Barton, .....	##	.....	.....	.....	.....	.....	.....	.....

\*No report; robbing pillars previous to abandonment and opening up new vein.

†These are the measurements of the last week in May; mine drowned for the balance of the year.

‡Inlet from No. 2 shaft fan.

§Inlet from No. 1 shaft fan; quantity as reported at face of gangway.

||Outlet from No. 2 shaft fan.

\*\*Main inlets.

††Main outlets.

‡‡Robbing pillars and re-opening old works; no reports received as yet.

§§Natural ventilation; re-opening old works; ventilation through caves to surface.

**Names of Successful Applicants for Mine Foreman Certificates of Qualification at the Annual Examination Held in Carbondale on the 14th, 15th and 16th of August, 1901:**

John L. Davis, Alban Evans and David T. Lewis, Olyphant; Peter Flannely, P. F. Fox and Thomas Johns, Vandling; A. S. Mason and Peter Kelly, Jermyn; Louis J. Robertson and Lewis H. John, Scranton; David T. Powell, Mayfield; Fred. W. Seymour, Wilkes-Barre; David D. Williams, Plymouth; Frank H. Rees and John Elvidge, Peckville; John Price and G. J. Thomas, Carbondale; David Girvan, Dunmore, and George V. O'Harra, Priceburg.

Those who passed for assistants certificates at the same examinations were:

Frank A. Gleason, James Mulderig and A. R. Hamfeltt, Dickson; John L. Williams, Thomas Muldowney, Richard Walsh, Francis Farrell, Hector Davis, William Pugh, John M. Jehu, William Morgan and Thomas Watkins, Scranton; James L. Barr and Arthur Bright, Throop; Michael Arkins, Peckville; James R. McCormick, Thomas B. Brown, David L. Thomas and John J. Moran, Olyphant; John P. Dickie, Wilkes-Barre; Gwilym S. Davis, Priceburg; John Sammon, Dunmore; John Cooke, Carbondale, and M. J. McAuric, Archbald.

**Board of Examiners.**

M. G. Robertson, Superintendent, Jessup.

P. G. McDonaugh, Miner, Carbondale.

Jos. T. Roberts, Miner, Jermyn.

Edward Roderick, Mine Inspector.



TABLE I—Showing names of Operators, Railroads, etc., etc., and Location of Collieries in the First Anthracite District for the Year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Delaware and Hudson Co.						
Leclairs Creek, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Northbrook, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Paddy Creek, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Okibant, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Grassy Island washery, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
White oak, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Jermyn, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Powderly, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
No. 1, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Racket Brook washery, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Coal Brook, .....	Lackawanna.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Clinton, .....	Wayne & Lack.	C. C. Rose, .....	Seranton, .....	.....	.....	Delaware and Hudson.
Temple Iron Co.						
Northbrook, .....	Lackawanna.	S. B. Thorne, .....	Seranton, .....	F. H. Hemebright, ..	Jermyn, .....	N. Y., Ont. and Western.
Falgarion, .....	Lackawanna.	S. B. Thorne, .....	Seranton, .....	F. H. Hemebright, ..	Jermyn, .....	Delaware and Hudson.
Sterrick Creek, .....	Lackawanna.	S. B. Thorne, .....	Seranton, .....	F. H. Hemebright, ..	Jermyn, .....	N. Y., Ont. and Western.
Lackawanna, .....	Lackawanna.	.....	.....	.....	.....	.....
Seranton Coal Co.						
Richmond No. 4, .....	Lackawanna.	John R. Bryden, ..	Seranton, .....	William L. Alb. n., ..	Peeckville, .....	N. Y., Ont. and Western.
Johnsons, .....	Lackawanna.	John R. Bryden, ..	Seranton, .....	John K. Berkhiser, ..	Peeckville, .....	N. Y., Ont. and Western.
Ontario, .....	Lackawanna.	John R. Bryden, ..	Seranton, .....	William Allen, .....	Peeckville, .....	N. Y., Ont. and Western.
Raymond, .....	Lackawanna.	John R. Bryden, ..	Seranton, .....	William Allen, .....	Peeckville, .....	N. Y., Ont. and Western.
Richmond No. 3, .....	Lackawanna.	John R. Bryden, ..	Seranton, .....	John K. Berkhiser, ..	Peeckville, .....	N. Y., Ont. and Western.
Hillside Coal and Iron Co.						
Clyfford, .....	Susquehanna.	W. W. Ingels, .....	Seranton, .....	V. L. Petersen, .....	Forest City, .....	Erie.
Forest City, .....	Susquehanna.	W. W. Ingels, .....	Seranton, .....	V. L. Petersen, .....	Forest City, .....	Erie.
Eric, .....	Susquehanna.	W. W. Ingels, .....	Seranton, .....	John F. Gallagher, ..	Mayfield, .....	Delaware and Hudson.
Kystone, .....	Lackawanna.	W. W. Ingels, .....	Seranton, .....	John F. Gallagher, ..	Mayfield, .....	Delaware and Hudson.
Glenwood, .....	Lackawanna.	W. W. Ingels, .....	Seranton, .....	John E. Gallagher, ..	Mayfield, .....	Delaware and Hudson.
Glenwood washery, .....	Lackawanna.	W. W. Ingels, .....	Seranton, .....	John E. Gallagher, ..	Mayfield, .....	Delaware and Hudson.
Pennsylvania Coal Co.						
Gipsy Grove, .....	Lackawanna.	W. A. May, .....	Seranton, .....	Sidney Williams, ....	Dunmore, .....	Erie.
No. 1, .....	Lackawanna.	W. A. May, .....	Seranton, .....	Sidney Williams, ....	Dunmore, .....	Erie.
Del., Lack. & W. R. R. Co.						
Storrs, .....	Lackawanna.	E. E. Loomis, .....	Seranton, .....	R. A. Phillips, .....	Seranton, .....	Delaware, Lack & West

Price, Pancoast Coal Co.	Lackawanna,	John R. Bryden, ..	Scranton, .....	J. J. Aitken, .....	Priceburg, .....	D. L. & W. & N. Y., O. and Western.
Pancoast, .....	Lackawanna,	W. G. Robertson, ..	Jessup, .....	.....	.....	Erie.
Dolph, .....	Lackawanna,	J. M. Rice, .....	Peckville, .....	.....	.....	N. Y., Ont. and Western.
Riverside Coal Co.	Lackawanna,	Chas. P. Ford, ....	Marshwood, .....	.....	.....	Moosic Mountain.
Moosic Mountain Coal Co.	Lackawanna,	Chas. P. Ford, ....	Marshwood, .....	.....	.....	D. L. & W., Erie and N. Y., Ont. and West.
Mt. Jessup Coal Co.	Lackawanna,	John Carney, .....	Dunmore, .....	John Walsh, .....	Dunmore, .....	Del., Lack. & Western.
Carney & Brown.	Lackawanna,	Morgan Davis, Jr., ..	Scranton, .....	.....	.....	N. Y., Ont. and Western.
Clark Tunnel Coal Co.	Lackawanna,	W. G. Thomas, ...	West Pittston, ...	.....	.....	N. Y., Ont. and Western.
Clark Tunnel, .....	Lackawanna,	W. L. Barton, ....	Carbondale, .....	.....	.....	N. Y., Ont. and Western.
Black Diamond Coal Co.	Lackawanna,	.....	.....	.....	.....	.....
Black Diamond, .....	Lackawanna,	.....	.....	.....	.....	.....
W. L. Barton.	Lackawanna,	.....	.....	.....	.....	.....
Barton, .....	Lackawanna,	.....	.....	.....	.....	.....

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the First Anthracite District for the year ending December 31, 1900.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Delaware and Hudson Co.												
Leggett's Creek, .....	Lackawanna, .....	275,406	31,273	4,633	311,312	236.5	619	2	4	11,612	4,229	60
Marvine, .....	Lackawanna, .....	204,978	24,687	2,879	232,344	225	499	2	5	10,037	1,148	61
Eddy Creek, .....	Lackawanna, .....	234,082	7,969	229	219,283	230	577	2	3	10,820	3,676	53
Olyphant, .....	Lackawanna, .....	446,208	43,459	7,968	497,235	232	604	2	2	10,305	7,399	48
Grassy Island, .....	Lackawanna, .....	63,257	.....	.....	63,257	232	455	1	1	7,747	4,812	7
Grassy Island washery, .....	Lackawanna, .....	229,441	3,293	1,837	234,391	116.75	33	.....	.....	.....	.....	.....
White Oak, .....	Lackawanna, .....	231,761	13,862	3,988	219,621	219.75	539	6	2	3,600	8,536	55
Jermyn, .....	Lackawanna, .....	52,665	5,173	.....	47,268	177.25	600	1	6	4,416	1,410	43
Nowdery, .....	Lackawanna, .....	50,690	6,111	.....	56,561	202	332	.....	.....	4,614	3,290	59
No. 1, .....	Lackawanna, .....	5,518	3,300	.....	8,818	169.75	434	.....	4	3,978	.....	.....
Rocky Brook washery, .....	Lackawanna, .....	539,719	13,343	.....	553,062	231.75	919	3	7	10,693	5,024	82
Cash Brook, .....	Lackawanna, .....	373,515	14,122	2,240	329,877	219.25	589	3	3	11,553	17,450	57
Clinton, .....	Wayne and Lack a., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals, .....	.....	2,736,310	167,152	22,504	2,926,366	194.82	6,438	19	39	89,105	58,181	513
Temple Iron Co.												
Lackawanna, .....	Lackawanna, .....	208,883	34,855	3,723	247,561	218.9	674	4	2	8,764	982	82
Sterrick Creek, .....	Lackawanna, .....	265,464	16,255	1,583	283,302	178.3	712	3	4	9,268	17,000	81
Edgerton, .....	Lackawanna, .....	106,863	10,005	446	117,314	157.4	402	1	1	4,374	135	69
North West, .....	Lackawanna, .....	196,969	9,877	894	207,689	186.6	420	1	1	6,409	560	83
Totals, .....	.....	838,119	71,092	6,646	915,857	185.8	2,208	9	8	28,746	18,617	305
Seranton Coal Co.												
Richmond No. 4, .....	Lackawanna, .....	30,969	5,840	1,822	38,631	115.3	201	.....	.....	1,750	4,400	26
Johnsons, .....	Lackawanna, .....	293,256	33,000	2,355	328,611	187.4	940	3	8	11,550	12,550	89
Ontario, .....	Lackawanna, .....	204,482	30,000	3,403	237,885	237.5	875	1	4	9,975	24,350	84

Richmond No. 3, .....	58,191	8,650	451	181.1	254	2	3,375	1,550	16	
Raymond, .....	270,364	18,490	1,492	289,596	689	3	9,865	2,300	47	
Totals, .....	857,262	95,440	9,423	962,375	186.3	7	36,315	45,550	2.2	
Hillside Coal and Iron Co.										
Clifford, .....	292,028	9,550	6,072	171,462	470	2	7,218	6,677	50	
Forest City, .....	331,376	26,463	3,788	492,025	380	2	17,394	5,087	88	
Erie, .....	127,682	7,305	3,365	135,572	401	1	4,526	4,945	48	
Lackawanna, .....	47,917	912	48,829	101.06	114	1	1,164	231	23	
Keystone, .....	41,813	13,222	60,535	37.25	270	2	1,074	2,211	29	
Lackawanna, .....	33,841			182.4	11					
Glenwood washery, .....										
Totals, .....	874,870	56,642	13,235	944,747	150.73	2	31,476	18,254	214	
Pennsylvania Coal Co.										
Gipsy Grove, .....	200,000	5,590		205,681	171.6	2	8,424	1,692	48	
No. 1, .....	124,413	3,252		127,664	104.4	1	5,064	816	39	
Totals, .....	324,403	8,842		333,345	168	3	13,488	2,508	87	
Delaware, Lack'a & Western R. R. Co.										
Storrs, .....	579,185	25,947	4,177	609,309	221.1	4	22,292	10,352	121	
Panocoast, .....										
Price, Panocoast Coal Co.										
Panocoast, .....	313,047	22,750	2,856	338,653	238.75	5	16,834	13,852	85	
Dolph, .....										
Dolph Coal Co.										
Dolph, .....	182,885	25,000	807	208,692	200.9	2	6,638	5,250	37	
Riverside, .....										
Riverside Coal Co.										
Riverside, .....	123,635	11,000	640	135,337	232.2	2	4,811	125	36	
Moosic Mountain Coal Co.										
Moosic Mountain, .....	109,715	3,000	2,330	115,048	172	262	1	5,387	1,700	41
Mt. Jessup, .....										
Mt. Jessup Coal Co.										
Mt. Jessup, .....	66,352	25,000	1,427	92,779	244.8	349	2	1,150	27,371	43
Murray, .....										
Carney & Brown.										
Murray, .....	65,772	60	9,503	75,375	238.5	141	3,053	361	23	
Clark Tunnel Coal Co.										
Clark Tunnel, .....	14,548	2,373	18,960	25,881	233.8	151	1	1,169	5,250	37
Black Diamond Coal Co.										
Black Diamond, .....	21,662	5,000	2,871	29,565	118.2	132	1	1,376	2,000	12
W. L. Barton Coal Co.										
Barton, .....	92	560	4,447	5,029	150	25	209	75	6	
Grand totals, .....	7,107,980	519,898	100,466	7,728,314	198.7	78	292,080	294,979	1,833	



TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.		
		Cylindrical.		Tubular.	Horse power.	Horse power.	Steam.									Air.	Electric.
Delaware and Hudson Co., .....	Lackawanna.	167	3,340	26	4,750	8,080	7	8	.....	169	9,593	31	31,977	22,895	6	3	
Temple Iron Co., .....	Lackawanna.	68	2,301	10	1,400	3,701	12	.....	.....	44	3,855	14	16,276	4,936	1	2	
Saratoga Coal Co., .....	Lackawanna.	41	1,235	35	3,595	3,605	8	.....	6	73	5,730	16	10,384	5,240	.....	4	
Hillsdale Coal and Iron Co., .....	Lackawanna.	26	460	35	1,000	2,895	4	.....	6	28	3,455	23	12,458	9,775	7	.....	
Pennsylvania Coal Co., .....	Lackawanna.	.....	.....	.....	1,000	1,600	3	.....	.....	26	1,947	6	3,235	1,800	.....	.....	
Delaware, Lacka and Western R. R. Co., .....	Lackawanna.	.....	.....	17	1,385	1,746	3	.....	.....	20	1,860	6	2,640	1,181	.....	.....	
Price, Pincoast Coal Co., .....	Lackawanna.	12	365	17	1,290	1,455	.....	.....	.....	12	1,226	1	1,000	1,000	.....	.....	
Edwards Coal Co., .....	Lackawanna.	17	285	7	1,770	1,200	2	.....	.....	14	721	4	676	100	.....	1	
Mt. Main Coal Co., .....	Lackawanna.	9	180	4	320	850	.....	.....	.....	11	821	2	850	75	.....	3	
Mt. Jessup Coal Co., .....	Lackawanna.	1	175	2	106	500	1	.....	.....	6	210	2	500	400	.....	.....	
Carney & Brown Coal Co., .....	Lackawanna.	20	500	8	675	1,175	1	.....	.....	16	900	4	3,500	2,500	1	1	
Clark Tunnel Coal Co., .....	Lackawanna.	.....	.....	3	90	270	.....	.....	.....	4	115	.....	.....	.....	.....	.....	
Black Diamond Coal Co., .....	Lackawanna.	3	90	.....	295	90	.....	.....	.....	1	170	1	100	50	.....	.....	
W. L. Barton Coal Co., .....	Lackawanna.	.....	.....	2	80	160	.....	.....	.....	1	89	.....	.....	.....	.....	.....	
Grand total, .....	.....	375	9,026	158	18,506	27,782	39	8	12	497	40,637	101	72,614	49,315	16	18	

TABLE III.—Showing the number of each class of employees at each colliery in the First Anthracite District, during the year 1901

Names of Operators and Collieries	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Superintendents, bookkeepers and clerks.	All other employees.		Total outside.	
Delaware and Hudson Co.																		
Leggett's Creek.	Lackawanna.	6	175	175	64	17	74	513	1	7	21	43	1	63	136	649		
Marvine.	Lackawanna.	7	160	160	94	30	96	649	1	8	14	62	1	65	150	699		
Edley Creek.	Lackawanna.	3	154	170	53	8	47	437	1	7	12	63	1	56	149	577		
Olyphant.	Lackawanna.	3	143	161	55	11	52	430	1	8	21	77	2	75	174	604		
Grassy Island.	Lackawanna.	3	169	160	50	8	24	405	1	2	17	77	1	30	50	455		
Vernsey Island washery.	Lackawanna.	1	168	151	69	3	37	429	1	1	1	12	1	18	33	33		
White Oak.	Lackawanna.	1	191	191	41	20	39	522	1	3	6	36	1	68	110	539		
Lowville.	Lackawanna.	1	19	6	41	3	6	88	1	1	3	8	1	30	78	96		
No. 1.	Lackawanna.	1	172	79	60	4	30	316	1	5	9	8	1	45	44	332		
Rocked Brook washery.	Lackawanna.	5	293	290	99	23	37	657	1	5	10	122	1	69	288	451		
Clinton.	Wayne and Lackawanna.	3	154	172	67	17	34	447	1	6	11	62	1	123	262	919		
Totals and averages.		24	1,980	1,632	716	144	508	5,023	12	61	127	727	5	683	1,415	6,438		
Temple Iron Co.																		
North West.	Lackawanna.	3	118	97	33	10	35	295	1	10	13	40	3	58	125	420		
Blairton.	Lackawanna.	1	35	56	27	1	14	235	1	8	9	65	3	81	167	402		
Stark Creek.	Lackawanna.	1	221	139	91	20	44	540	1	9	11	63	3	85	172	712		
Lackawanna.	Lackawanna.	1	187	160	82	12	83	627	1	1	17	66	3	52	147	674		
Totals and averages.		8	624	512	233	43	176	1,597	4	35	50	234	12	276	611	2,208		

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.						Occupations of Persons Employed Outside.						Grand total inside and outside.			
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.		Superintendents, bookkeepers and clerks.	All other employes.	Total outside.
Swanton Coal Co.	Lackawanna.	1	.....	46	45	16	2	37	141	1	4	5	15	1	34	60	201
	Lackawanna.	2	5	266	250	95	30	73	715	1	11	20	105	3	85	225	940
	Lackawanna.	1	.....	290	175	78	6	58	699	1	13	22	128	3	49	266	875
	Lackawanna.	1	2	75	80	23	6	25	212	1	4	13	24	2	15	54	284
	Lackawanna.	1	.....	229	205	37	25	31	529	1	8	11	81	12	53	160	689
Totals and averages.	.....	8	7	864	755	249	69	224	2,206	5	40	77	374	11	296	783	2,979
Hillside Coal and Iron Co.	Susquehanna.	1	.....	134	119	45	6	20	325	1	3	7	55	3	76	145	470
	Susquehanna.	3	.....	292	292	81	23	86	779	1	12	14	57	3	73	160	939
	Lackawanna.	2	.....	101	162	52	8	32	277	1	4	10	65	2	22	104	401
	Lackawanna.	1	.....	30	30	17	.....	5	83	.....	2	2	12	1	13	31	114
	Lackawanna.	2	.....	80	72	15	3	25	197	1	4	11	30	2	25	73	270
Totals and averages.	.....	9	.....	638	666	210	40	178	1,631	5	25	44	222	11	216	524	2,265
Pennsylvania Coal Co.	Lackawanna.	1	1	140	20	65	12	26	265	1	2	12	49	1	43	108	373
	Lackawanna.	2	2	166	136	68	11	60	445	1	4	18	66	1	46	136	581
Totals and averages.	.....	3	3	306	156	133	23	86	710	2	6	30	115	2	89	244	954
Del., Lack'a & West. R. R. Co.	Lackawanna.	4	7	257	385	124	19	141	1,037	2	7	22	86	3	81	201	1,238

Price Pancost Coal Co.	Lackawanna.	3	6	175	155	94	29	109	601	1	7	18	119	5	76	216	827
Pancost, .....	Lackawanna,	2	.....	135	120	60	4	29	359	1	7	15	127	4	54	208	558
Dolph, .....	Lackawanna,	1	1	112	57	35	8	11	255	1	5	9	39	2	24	71	266
Riverside Coal Co.	Lackawanna,	1	.....	89	69	41	11	15	226	1	8	8	.....	5	14	36	262
Moosie Mountain Coal Co.	Lackawanna,	2	1	66	57	24	10	44	204	1	13	30	88	8	5	145	349
Moosie Mountain,	Lackawanna,	1	.....	30	30	24	5	13	103	1	2	2	16	1	16	38	141
Mt. Jessup, .....	Lackawanna,	1	1	36	27	10	1	24	100	1	3	4	17	3	23	51	151
Murrays, .....	Lackawanna,	1	1	36	37	11	2	4	92	1	2	3	12	1	21	40	132
Clark Tunnel Coal Co.	Lackawanna,	1	.....	6	6	2	.....	.....	15	1	1	2	3	1	2	10	25
Black Diamond Coal Co.	Lackawanna,	69	47	5,484	4,634	1,966	408	1,562	14,170	39	222	441	1,951	74	1,876	4,603	18,773
Black Diamond,	Lackawanna,																
W. L. Barton Coal Co.	Lackawanna,																
Totals, .....	.....																





TABLE IV—List of fatal accidents that occurred in and about the mines of First Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	Pasquale Gardulo, .....	Italian, .....	Laborer, ...	30	M.	1	1	Fancoast, .....	Lackawanna,	The miner had just fired a shot and was trimming down some top coal, when the roof gave way, falling on him and laborer.
4	George Bates, .....	American, .....	Dumper, ...	42	M.	1	3	Lackawanna, .....	Lackawanna,	While dumping a car of culm on a trestle twenty feet high, he slipped and fell, and was fatally injured. He died on the following day. He was subject to fits, and it is supposed he was attacked with one at this time.
5	William Smith, .....	Welsh, .....	Driver, ...	18	S.	.....	.....	Lackawanna, .....	Lackawanna,	While driving a mule hitched to a trip of empty cars on a ganaway, the mule turned up into a chamber, while the cars ran on the straight road until pulled off the track and against a prop, dislodging it from under a bad piece of roof, letting it down on the boy, killing him instantly.
6	Watkin Williams, .....	Welsh, .....	Miner, ....	24	S.	.....	.....	Storrs No. 1, .....	Lackawanna,	He was passing a prop when he inserted a shaft, each of them and retired to a place of safety. In a short time one of the blasts exploded and one of the men who was with him started for the face, but he stopped him, remarking that he was firing two shots. He waited a few minutes then started back, thinking the other had missed, the face the shot exploded, killing him instantly.
13	Thomas Green, .....	English, .....	Driver, ...	18	S.	.....	.....	Ontario, .....	Lackawanna,	Head crushed between cars while trying to uncouple them while they were in motion.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 19	John Tranovich, .....	Pole, .....	Laborer, ..	26	M.	1	1	Lackawanna, ....	Lackawanna,	While the miner was working under a piece of roof, which he had examined shortly before, it fell and injured him and killed the laborer. After lighting a squib to fire a blast in "top bench," he and his fellow miner retired to a place of safety. Then after a few minutes, thinking the squib had "tripped" and would not explode, they placed a scaffold to raise them high enough to insert another squib, the blast exploded, fatally injuring a companion, while his companion escaped. While making a temporary road through an abandoned opening, a slab of rock, which had been examined by the assistant foreman and was thought to be safe, fell, and so seriously injured him that he died two hours later. These two men were returning to the face of their chamber after a blast. The miner in the lead walked up to the face, which was back of the place where the coal thrown by the shot blocked the track, when a "saddle" of rock fell and instantly killed them. Was one of a gang timbering to prevent a "squeeze" from spreading, when suddenly a cave occurred, and he was thrown violently by the force of the wind against the "rib," causing a fracture of the skull.
30	Thomas Champion, ....	English, .....	Miner, ....	52	M.	1	1	Jermyn, .....	Lackawanna,	
Feb. 10	Thomas Healey, .....	Irish, .....	Laborer, ..	40	M.	1	1	Marvine, .....	Lackawanna,	
12	Michael McGowan, .....	American, .....	Laborer, ..	27	S.	.....	.....	White Oak, .....	Lackawanna,	
12	William Udo, .....	American, .....	Laborer, ..	18	S.	.....	.....	White Oak, .....	Lackawanna,	
20	Lawrence Cartwell, ....	Irish, .....	Timberman	35	S.	.....	.....	Glenwood, .....	Lackawanna,	

21	Peter Malia, .....	Irish, .....	Laborer, ..	35	M.	1	2	Raymond, .....	Lackawanna,	The miner had drilled a hole in a slab of roof rock for the purpose of blasting it down, and had told Malia not to go under it, as it was dangerous. He disobeyed orders and was killed by it falling.
March	5	Stephen Howey, .....	American, .....	Miner, ....	45	M.	1	2	Johnsons, .....	He was "opening a chamber," and had fired two shots which had removed the coal from the slab of rock. His brother who was laboring with him thought the rock was unsafe, and told him so. He replied that "he guessed it was all right," but just as he spoke it fell and killed him.
28	John Spilko, .....	Hungarian, ....	Laborer, ..	34	M.	1	1	Simpson, .....	Lackawanna,	Struck by a trip of empty cars as he was walking on a slope on his way to work. This man's miner returned to the face of his gangway after a blast and was "working out" some loosed coal, while the laborer approached, and the latter was standing on the lower side of the gangway watching the miner when a second explosion occurred in the form of a second explosion, which fatally injured the laborer, while the miner escaped with slight injuries.
3	Fred. Halfpenny, .....	English, .....	Runner, ..	20	S.	.....	.....	Pancoast, .....	Lackawanna,	Was riding down a "short run" on front end of a car which collided with another and fractured his leg and otherwise injured him.
16	Michael Jorden, .....	American, .....	Laborer, ..	46	M.	1	5	Coal Brook, .....	Lackawanna,	After firing two blasts in a piece of roof which he and others were taking down, and after trying to bar it down and failing, they ceased their efforts for awhile to catch their breath, while doing so, it fell and caught under the miner's leg, while heading a slab of coal at the face of a chamber, a slab of rock fell and broke his back. He died on May 15.
23	Theodore Bawack, .....	Russian, .....	Laborer, ..	30	M.	1	1	Glenwood, .....	Lackawanna,	While working with a pick at the face of his chamber, a small piece of top coal, which he had several times previously examined and thought to be safe, fell on him and broke his back.
24	Thomas Johns, .....	English, .....	Miner, ....	54	M.	1	3	Clinton, .....	Lackawanna,	He died on the 27th.
May	22	Anthony Lynott, .....	Irish, .....	Miner, ....	52	M.	1	2	Sterrick Creek, ...	He was mining out a piece of a "middle bench" when a piece of coal fell and almost instantly killed him.
June	1	Berney Rudufski, .....	Pole, .....	Driver, ..	15	S.	.....	Johnsons, .....	Lackawanna,	A miner refused to clear some coal which had been down on the track by accident, and while this young man was clearing it, a fall of rock occurred and killed him.



TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Cullery.	County.	Nature and Cause of Accident in Brief.
June 3	Thomas Halpenny, .....	English, .....	Runner, ..	29	S.	....	....	Pancoat, .....	Lackawanna,	He tried to couple cars on a branch while they were in motion, and his head was so severely crushed that he died two days afterward. While mining at the face of his chamber, a piece of top fell and actually injured him. He missed out the bottom bench after a shot which failed to "cut."
11	Evan Williams, .....	Welsh, .....	Miner, ....	46	M.	1	....	Clinton, .....	Lackawanna,	
13	Frank Wozzik, .....	Russian, .....	Miner, ....	45	M.	1	5	Sterrick Creek, ...	Lackawanna,	
24	Tony Coda, .....	Italian, .....	Miner, ....	24	M.	1	....	Edgerton, .....	Lackawanna,	
25	Jacob Rushak, .....	Pole, .....	Miner, ....	33	M.	1	3	Storrs No. 1, .....	Lackawanna,	
July 10	Anthony Marcon, .....	Slav, .....	Laborer, ..	36	S.	....	....	Clinton, .....	Lackawanna,	
12	Frank Sabatina, .....	Italian, .....	Laborer, ...	28	M.	1	....	Riverside, .....	Lackawanna,	This man and another were in a car that became detached just as it was going over the angle of a short slope, and ran to the bottom, where it collided with another, and so seriously injured him that he died on the same day.

25	Angelo Genarre, .....	Italian, .....	Laborer, ..	36	S.	.....	Mt. Jessup, .....	Lackawanna,	After an unsuccessful effort on the part of the miner and his laborer to pry down a piece of top coal, they went to work under it, when it gave way and fatally injured the laborer. Shortly after firing a shot, a slab of rock fell on him and broke his back. He died on the 23d.
Aug.	7	John Cristoff, .....	Slav, .....	Miner, ....	27	M.	1	No. 1 shaft, .....	Shutting the door to the face of his chamber, after firing a shot, a slab of rock fell on him and broke his back. He died on the 23d.
	16	John Blaschock, .....	Slav, .....	Miner, ....	38	M.	1	Mt. Jessup, .....	While tamping a hole at the face of his chamber, a slab of rock fell and crushed him to death.
	27	Martin McCormick, .....	American, .....	Miner, ....	40	M.	1	Gipsy Grove, .....	While tightening a cap piece over a prop, which had been loosened by a blast, a slab of rock fell, severely injuring him, and causing his death the same day.
	29	Anthony Corcoran, .....	American, .....	Runner, ..	18	S.	.....	Leggetts Creek, ..	While stepping from one side of a track to the other on a slope, he tripped on a prop and fell in front of cars and was killed.
Sept.	5	Peter Dunn, .....	Hungarian, .....	Slate picker	26	S.	.....	Olyphant, .....	He went into a culm pocket to shovel culm, and was drawn through and smothered.
	6	Lewis Petenski, .....	Italian, .....	Miner, ....	37	S.	.....	Moosic Mountain, ..	While standing on a slope, one of a trip of cars that was descending became uncoupled, ran down the slope to the third lift, where it left the track, striking him and causing his death.
	23	John Tool, .....	Irish, .....	Loader, ..	50	S.	.....	Marvine, .....	While trying to start a railroad gondola with a pinch bar, another ran against him from behind and killed him.
	23	George Volkafski, .....	Pole, .....	Laborer, ..	20	S.	.....	Pancoast, .....	He was walking into the shaft at No. 3 vein, and fell a distance of 300 feet. There was a door twenty feet from shaft, and a gate three feet from edge of shaft, both of which had to be opened by him before reaching the shaft. This was his first day in the mine, and it is presumed that his light went out.
Oct.	1	John Megholso, .....	Slav, .....	Miner, ....	36	S.	.....	No. 2 shaft, .....	He was placing a set of timber and had the collar supported by a temporary leg while he was making place for the permanent one, and he struck and displaced the support, causing the collar to fall on him, crushing his skull.
	9	Joe Bucklovla, .....	Italian, .....	Laborer, ..	26	M.	1	Raymond, .....	While loading a car at face of chamber, a large "saddle" shaped rock came away above a small bench of coal and instantly killed him.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct. 11	William Foley, .....	American, .....	Laborer, ..	32	S.	.....	.....	Olyphant, .....	Lackawanna,	While shoveling coal at the face of a chamber, a small piece of top coal and rock gave way, and so seriously injured him that he died on his way home.
11	Anthony Peare, .....	Pole, .....	Laborer, ..	30	S.	.....	.....	Lackawanna, .....	Lackawanna,	As a mule was pulling a car to the face of a chamber by means of a chain and pulley, the prop to which the pulley was attached gave way, allowing the car to run back to a stopping block fifteen feet below, where it was thrown from the track against the roof, where it struck and killed him. He was fatally injured and died in a few hours.
16	Patrick H. Mealon, .....	American, .....	Assistant foreman, .....	29	M.	1	.....	White Oak, .....	Lackawanna,	A new plane, across old chambers, was in course of construction, and a loaded car was run down from the face with all wheels sprung, but when within a short distance from the bottom, it left the track and displaced three props. The runner, who went down after it, learned the situation, then returned a short distance up the plane and shouted to the men at the face to come down and bring their tools with them. He was struck and killed by Kearney, Healy and Deady, who came down. Mealon, the assistant foreman and a very careful man, took a hammer and placed one hand against the roof while he struck it with the ham-
16	John Healy, .....	American, .....	Laborer, ..	38	M.	.....	2	White Oak, .....	Lackawanna,	

16	John Kearney, .....	American, .....	Laborer, .....	31	S. ....	White Oak, .....	Lackawanna, .....
16	Mathew Dougher, .....	American, .....	Driver, ...	20	S. ....	White Oak, .....	Lackawanna, .....
22	Michael Chiloinski, ....	Pole, .....	Laborer, ..	43	M. ....	Pancoast, .....	Lackawanna, .....
Nov. 6	Edward McDermott, ....	Irish, .....	Crusher boy	15	S. ....	Coal Brook, .....	Lackawanna, .....
14	Frank Simonski, .....	Pole, .....	Miner, ....	41	M. ....	4 Dolph, .....	Lackawanna, .....
15	John Mackey, .....	American, .....	Miner, ....	27	S. ....	Sterrick Creek, ...	Lackawanna, .....
16	John Slocki, .....	Slav, .....	Miner, ....	56	M. ....	5 Black Diamond, ..	Lackawanna, .....
21	Daniel Waterspiel, .....	American, .....	Miner, ....	39	S. ....	Storrs No. 3, ...	Lackawanna, .....
23	John Devexs, .....	American, .....	Driver, ...	16	S. ....	Leggetts Creek, ..	Lackawanna, .....
25	Dominic Sorifini, .....	Italian, .....	Miner, ....	22	S. ....	Riverside, .....	Lackawanna, .....

rier, and thus made a careful examination of the whole space from which the props had been removed. After this, all hands began to reload the car and in a few minutes had it filled, and run out, then began the work of re-stand the props, and while Healy was wedging the first, a great mass of rock fell and instantly killed the four men. It was afterward seen that there were two large and very treacherous wells directly over where Healy was placed, and these gave way and caused the fall. While stepping across a track, after being told not to do so, as a car was about to be run down; he was struck and fatally injured, and died Nov. 2. While going toward the chute conveying coal to a pair of small crushers, he fell on the pinion wheels, which at the time were uncovered, a plank from the top of them having been temporarily removed by some person unknown. He died four hours after.

While starting a drill a hole at the face of his chamber, a "faulty" piece of rock fell on him.

After reaching the face of his chamber, a blast, a large slab of rock fell and killed him.

Instantly killed by a fall of sand rock, which occurred when he was at the "working face."

Was throwing a stick of dynamite with a mine lamp, when it exploded, mangle his arms and body, causing his death in a short time.

He was sitting in an air motor, and was being killed at a point one thousand feet away from his post.

After being told by the person acting as fire boss also by the miner working next to him in his own language to go home as there was gas in his place, he nevertheless, in the absence of the fire boss ventured in to load one car, as he said, and was fatally burned by an explosion of gas.



TABLE IV.—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Dec. 6	William McCormick, ....	Irish, .....	Miner, ....	64	M.	1	1	Storrs No. 1, .....	Lackawanna,	He had on the preceding day, fired a shot on the 'rill' to widen his place, and was, when injured, barring out the loosened coal from the middle track, when a piece of timber fell, causing fatal injuries; he died four hours later.
11	James McManamam, ....	American, .....	Laborer, ..	40	M.	1	1	Clark Tunnel, ....	Lackawanna,	While in a stooping position, a "slippy" piece of rock from the side of the gangway fell, and injured him so that he died on the following day.
19	Jacob Onelonski, .....	Pole, .....	Laborer, ..	31	M.	1	1	Johnsons No. 2, ...	Lackawanna,	A charge of powder which the miner was trying to force to the back of a hole with a drill exploded, causing severe injuries to the miner and fatal injuries to the laborer, who died on the following day.
19	James Fannan, .....	American, .....	Footman, 25	S.	.....	.....	.....	Grassy Island, ....	Lackawanna,	While pushing an empty car off the side of a slope of about a piece of ice fell down and first, striking the cover of cage and glancing off, struck Fannan on side of head, causing what is supposed to have been concussion of the brain. He died on the 25th.
23	Leon Yablovenski, .....	Pole, .....	Miner, ....	30	M.	1	1	Raymond, .....	Lackawanna,	While thawing dynamite by use of his mine lamp, it exploded and blew him to pieces.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the First Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	Michael Zernack, .....	Hungarian, ....	Miner, .....	35	M.	Eddy Creek, .....	Lackawanna,	Severely burned by an explosion of gas.
2	George Gotch, .....	Hungarian, ....	Laborer, .....	50	M.	Eddy Creek, .....	Lackawanna,	Severely burned by an explosion of gas.
16	Michael Moran, .....	American, .....	Dumper, .....	32	M.	No 1 slope, .....	Lackawanna,	Arm injured by props rolling against him necessitating amputation.
16	Charles Pasten, .....	English, .....	Miner, .....	44	M.	Pancoast, .....	Lackawanna,	Face and hands burned by gas.
19	Frank Fallon, .....	American, .....	Driver, .....	17	S.	Olyphant, .....	Lackawanna,	Leg fractured by cars while he was riding between them.
21	Joseph Bunone, .....	Italian, .....	Miner, .....	45	M.	Glenwood, .....	Lackawanna,	Hip dislocated by fall of coal.
21	Peter Murphy, .....	American, .....	Brakeman, ...	18	S.	Mervine, .....	Lackawanna,	Leg fractured by prop falling on it.
22	Thomas Lattus, .....	Irish, .....	Laborer, .....	30	M.	No. 1 Slope, .....	Lackawanna,	Leg fractured by car pushing a prop against it.
26	Paul Dunney, .....	Pole, .....	Laborer, .....	30	S.	Marvine, .....	Lackawanna,	Leg fractured by car jumping track and head block.
28	George Burnhardt, .....	German, .....	Miner, .....	29	S.	Coal Brook, .....	Lackawanna,	Back and foot injured by fall of coal.
23	John Alexander, .....	Welsh, .....	Miner, .....	43	M.	Storrs No. 2, .....	Lackawanna,	Body injured by fall of rock at face of chamber.
28	Michael Hoofin, .....	Austrian, ....	Miner, .....	26	M.	Johnsons No. 1, .....	Lackawanna,	Burned by gas which had been ignited by a blast.
29	Joseph Shutah, .....	Pole, .....	Miner, .....	42	M.	Lackawanna, .....	Lackawanna,	Injured by fall of rock.
30	Harry Banderbury, .....	English, ....	Driver, .....	17	S.	Ontario, .....	Lackawanna,	Leg bruised by car jumping track.
31	Frank Butchaski, .....	Pole, .....	Driver, .....	16	S.	Johnsons No. 1, .....	Lackawanna,	Leg fractured by mule suddenly jerking car.
Feb. 2	Samuel Edwards, ...	Welsh, .....	Miner, .....	56	M.	Eddy Creek, .....	Lackawanna,	Leg fractured by a rope at head of chamber.
5	Vivant Prolochuck, ....	Pole, .....	Slate picker, ...	14	S.	Edgerton, .....	Lackawanna,	Leg fractured by slipping against a chain in breaker.
13	Dominic Reddington, ...	Irish, .....	Miner, .....	32	M.	Eddy Creek, .....	Lackawanna,	Ribs fractured by having been crushed between a car and a prop.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb. 15	Burton B. Smith, .....	American, .....	Driver, .....	33	M.	Storrs No. 2, .....	Lackawanna,	Severely injured by having been squeezed between two trips of cars.
15	Harry Lee, .....	American, .....	Driver, .....	17	S.	Storrs No. 3, .....	Lackawanna,	Hand crushed between cars.
28	Gwlin Davis, .....	American, .....	Brattice man, .....	25	M.	Eddy Creek, .....	Lackawanna,	Leg and hands burned by an explosion of gas.
March 4	Henry Pilger, .....	German, .....	Door boy, .....	16	S.	No. 2 shaft, .....	Lackawanna,	Slipped when trying to get on cars.
5	Samuel Sears, .....	American, .....	Laborer, .....	51	S.	Coal Brook, .....	Lackawanna,	A piece of coal rolled down a pitch against his leg and broke it.
8	William McGinty, .....	American, .....	Driver, .....	15	S.	Olyphant, .....	Lackawanna,	Tripped on a rail; his arm was broken.
11	Cornelius Colprice, .....	Irish, .....	Miner, .....	36	M.	Storrs No. 3, .....	Lackawanna,	Struck on head by a piece of coal.
18	Edward Sullivan, .....	Irish, .....	Driver, .....	15	S.	Raymond, .....	Lackawanna,	Leg fractured by falling under a car.
	P. F. Morrison, .....	American, .....	Runner, .....	21	S.	Clifford, .....	Lackawanna,	Cars jumped the track and crushed his arm so that amputation was necessary.
21	Michael Manolic, .....	Pole, .....	Laborer, .....	48	M.	Forest City, .....	Susquehanna,	Leg fractured by cars running into him.
24	Tony Roman, .....	Slav, .....	Miner, .....	34	M.	Grassy Island, .....	Lackawanna,	Fall of rock dislocated his hip.
26	Thomas Coleman, .....	American, .....	Miner, .....	27	S.	White Oak, .....	Lackawanna,	Head injured by a falling prop.
April 2	Dominic Rossi, .....	Italian, .....	Miner, .....	39	M.	Dolph, .....	Lackawanna,	Slightly injured by explosion of blast.
3	Steve Kozo, .....	Slav, .....	Laborer, .....	22	S.	Sterrick Creek, .....	Lackawanna,	Squeezed between two cars.
11	John Tubko, .....	Pole, .....	Laborer, .....	24	M.	Clinton, .....	Lackawanna,	Leg fractured by a piece of rock falling on it.
13	Thomas Hyland, .....	Irish, .....	Miner, .....	50	M.	Leggatts Creek, .....	Lackawanna,	Face severely injured by a premature explosion of a blast; used his light a squib.
22	Thomas Pierce, .....	American, .....	Miner, .....	42	M.	Storrs No. 2, .....	Lackawanna,	Leg broken by a fall of rock.
23	John Duffy, .....	Irish, .....	Miner, .....	48	M.	Clark Tunnel, .....	Lackawanna,	Leg sprained by fall of coal at face of car.
24	William Thomas, .....	American, .....	Driver, .....	16	S.	Storrs No. 2, .....	Lackawanna,	Car jumped the track and broke his leg.

25	June	Frank Smith, .....	American, .....	Slate picker, ..	14	S.	Pancoast, .....	Lackawanna,	Arm crushed by climbing out of his place in the breaker and coming in contact with machinery.
29		Peter Quinn, .....	Irish, .....	Runner, .....	23	S.	Pancoast, .....	Lackawanna,	Arm fractured by falling in front of a car.
30		Adam Romanchock, ...	Pole, .....	Miner, .....	42	M.	Pancoast, .....	Lackawanna,	Skull crushed by a fall of rock at face of chamber.
1	May	Paul Kulak, .....	Pole, .....	Laborer, .....	24	S.	Marvine, .....	Lackawanna,	Hand broken by explosion of gas.
1		John Kernan, .....	Irish, .....	Miner, .....	35	M.	Storrs No. 1, .....	Lackawanna,	Leg fractured by fall of rock.
3		Richard Griffith, .....	Welsh, .....	Runner, .....	25	M.	Lackawanna, .....	Lackawanna,	Caught between door and car; his leg was broken.
7		Benjamin Thomas, .....	American, .....	Driver, .....	16	S.	Gipsy Grove, .....	Lackawanna,	Fell under a car and his face was severely cut.
8		George Savage, .....	Hungarian, ....	Door boy, ....	14	S.	Pancoast, .....	Lackawanna,	Car jumped the track and cut his leg.
9		Adam Chernicki, .....	Pole, .....	Miner, .....	25	S.	Dolph, .....	Lackawanna,	Rock fell on him and bruised his back and hips.
20		William Freize, .....	Welsh, .....	Miner, .....	32	M.	Storrs No. 2, .....	Lackawanna,	Coal fell on him and injured his spine.
20		Thomas Turner, .....	American, .....	Miner, .....	35	M.	Storrs No. 1, .....	Lackawanna,	Rock fell on him and fractured one of his ribs, were engaged deepening the Pancoast air shaft. The shift preceding had quit work about 6 o'clock in the morning, and this shift was to start at 2 o'clock. Hodgson was in charge, but not having found much gas, he failed to go down to examine the place with a safety lamp, as he should have done before the men started down on the bucket. When four of them had descended, the bucket and the cage started to the top of the cage and two others hit on the cage about thirty feet above, an explosion of gas occurred and very severely burned Carden and Northrup; the others were not so severely injured.
6	June	William Hodgson, .....	English, .....	Sinker, .....	32	M.	Pancoast, .....	Lackawanna,	Leg caught between cars and fractured.
6		George Short, .....	English, .....	Sinker, .....	30	S.	Pancoast, .....	Lackawanna,	A car on which he was standing jumped the track, throwing him off and in front of a trip.
6		James Curran, .....	English, .....	Sinker, .....	34	M.	Pancoast, .....	Lackawanna,	Car run over his foot, ears and dislocated.
6		Wm. Northrup, .....	English, .....	Sinker, .....	45	M.	Pancoast, .....	Lackawanna,	Door post struck falling, struck the boy and his leg was broken.
6		Abdel Salazar, .....	Irish, .....	Sinker, .....	40	M.	Pancoast, .....	Lackawanna,	
6		Harry Bray, .....	English, .....	Sinker, .....	30	S.	Pancoast, .....	Lackawanna,	
11		Paul Sheptock, .....	Pole, .....	Driver, .....	42	M.	Simpson, .....	Lackawanna,	
14		William Deorle, .....	American, ....	Brakeman, ....	22	S.	Johnsons, .....	Lackawanna,	
24		William J. Williams, ...	American, ....	Driver, .....	16	S.	Marvine, .....	Lackawanna,	
24		John Mehalitch, .....	Austrian, ....	Door boy, .....	15	S.	Sterrick Creek, .....	Lackawanna,	





8	Andy Perill, .....	Italian, .....	Laborer, .....	40	M.	Coal Brook, .....	Lackawanna, .....	Fell from a car and his leg was broken.
10	Frank Mecon, .....	Pole, .....	Driver, .....	16	S.	Pancoast, .....	Lackawanna, .....	Fell in front of car, which ran over his arm.
13	Benjamin Hodgson, .....	English, .....	Runner, .....	16	S.	Pancoast, .....	Lackawanna, .....	Ribs fractured; kicked by a mule.
14	Frank Krunchock, .....	Slav, .....	Laborer, .....	28	S.	Johnsons, .....	Lackawanna, .....	While loading a car a ball rock fell on him, fracturing his leg.
19	Richard Johnkofscki, .....	Pole, .....	Laborer, .....	40	S.	Richmond No. 3, .....	Lackawanna, .....	Back fractured, falling back.
19	George Denish, .....	Hungarian, .....	Slate picker, .....	12	S.	Ontario, .....	Lackawanna, .....	Foot injured by a pinion wheel while playing in a breaker.
19	James Barbour, .....	Irish, .....	Miner, .....	41	M.	Erie, .....	Lackawanna, .....	Rock fell and cut his scalp.
20	Michael Neary, .....	Irish, .....	Miner, .....	33	M.	Gipsy Grove, .....	Lackawanna, .....	Ankle injured by coal from a blast.
24	Adam Chips, .....	Pole, .....	Laborer, .....	22	S.	Storrs No. 1, .....	Lackawanna, .....	Face lacerated and eyes injured by the explosion of a cap with which he was playing.
29	Steve Kollish, .....	Pole, .....	Laborer, .....	38	M.	Mt. Jessup, .....	Lackawanna, .....	Leg fractured by a fall of rock.
10	P. J. Hennigan, .....	American, .....	Miner, .....	55	M.	White Oak, .....	Lackawanna, .....	Hips injured by a fall of coal.
11	Steve Verniski, .....	Pole, .....	Miner, .....	28	M.	Johnsons, .....	Lackawanna, .....	Blast exploded and fractured his skull.
13	Frank Gunner, .....	Irish, .....	Miner, .....	38	M.	Gipsy Grove, .....	Lackawanna, .....	Head and body injured by a fall of rock.
17	Peter Kearney, .....	American, .....	Driver, .....	15	S.	Raymond, .....	Lackawanna, .....	While sitting on bumper of a car sliding foot along the rail, his foot caught, throwing him under car, which passed over his leg, crushing it so badly that amputation was necessary.
18	Henry McMahon, .....	American, .....	Laborer, .....	19	S.	Richmond No. 3, .....	Lackawanna, .....	Fall of rock crushed his arm.
21	Jacob Grezenda, .....	Pole, .....	Miner, .....	32	M.	Storrs No. 2, .....	Lackawanna, .....	Face and arm burned by an explosion of powder, which occurred while he was trying to force it to the back of a hole which ran off.
21	John Doherty, .....	American, .....	Runner, .....	24	S.	Johnsons, .....	Lackawanna, .....	Leg crushed by a car which ran off the track against him.
26	Mike Bardanko, .....	Austrian, .....	Miner, .....	41	M.	Mt. Jessup, .....	Lackawanna, .....	After being covered by all the rock which he thought loose, another piece which he failed to detect fell on him and broke his leg.
1	John McGlaughlin, .....	American, .....	Driver, .....	18	S.	No. 1 slope, .....	Lackawanna, .....	Severely injured between the roof of the gangway and the coal on the car.
1	Wilson Bridges, .....	English, .....	Miner, .....	30	M.	Pancoast, .....	Lackawanna, .....	A seam in the roof was uncovered by a blast, and on returning to the face he put his lamp up to examine it, when a string of feeder of gas issuing from it ignited and burned him.
7	Owefrey Lawrey, .....	Austrian, .....	Miner, .....	35	M.	Kewstone, .....	Lackawanna, .....	Came down him and broke his leg.
13	Peter Fewkoski, .....	Pole, .....	Laborer, .....	32	M.	Storrs No. 1, .....	Lackawanna, .....	A large piece of coal fell and rolled against his leg and broke it.

Sept.

Oct.

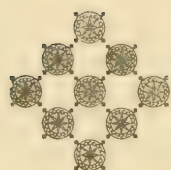
TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Nov.	1 James Grady, .....	Irish, .....	Fire boss, ....	60	M.	Leggetts Creek, .....	Lackawanna,	<p>Both these men were burned on face and hands by an explosion of a small body of gas in old workings. Grady was on a tour of inspection of old workings which took Davis with him and had proceeded a considerable distance when the gas was encountered and exploded by naked lights which they carried. Grady had been fire boss in this mine for many years, and had made hundreds of tours through this section with a safety lamp, and was known to be a very careful and competent fire boss, but for several years had not detected any gas and from this, confident of his own good luck in this department, he had neglected to take a safety lamp, although told by the mine foreman to do so, and was caught by the subtle enemy and severely injured.</p> <p>Fell when running along side of motor and his leg was broken. Tried to uncouple cars while they were in motion and was squeezed between them.</p> <p>Fall of coal injured him. A split of rock fell, fracturing his collar bone and ribs.</p>
1	1 John Davis, .....	Welsh, .....	Brattice man, ..	24	S.	Leggetts Creek, .....	Lackawanna,	
	4 Edward Glynn, .....	American, .....	Motor boy, ....	16	S.	Coal Brook, .....	Lackawanna,	
	5 William Flanagan, ....	Irish, .....	Foot man, ....	33	S.	Jermyn, .....	Lackawanna,	
	11 Joseph Fossold, .....	German, .....	Miner, .....	62	M.	Riverside, .....	Lackawanna,	
	11 Rees Jones, .....	American, .....	Miner, .....	33	M.	Storrs No. 1, .....	Lackawanna,	

11	Michael Muldoon, .....	Irish, .....	Miner, .....	67	M. Jermyn No. 1, .....	Lackawanna, .....
11	Geo. Baker, .....	American, .....	Miner, .....	27	S. Jermyn No. 1, .....	Lackawanna, .....
11	Ant. Kusiuck, .....	Hungarian, .....	Laborer, .....	25	M. Jermyn No. 1, .....	Lackawanna, .....
13	Charles Gavaldo, .....	Pole, .....	Laborer, .....	22	S. Pancoast, .....	Lackawanna, .....
15	Jacob Coniack, .....	Russian, .....	Laborer, .....	25	S. Jermyn, .....	Lackawanna, .....
20	Harry Cowles, .....	Welsh, .....	Miner, .....	40	M. Leggetts Creek, .....	Lackawanna, .....
20	Walter Rolls, .....	American, .....	Head man, .....	16	S. Mt. Jessup, .....	Lackawanna, .....
22	Frank Scott, .....	American, .....	Driver, .....	15	S. Coal Brook, .....	Lackawanna, .....
25	Pat. Murphy, .....	Irish, .....	Miner, .....	52	S. Gipsy Grove, .....	Lackawanna, .....
25	Mike Pituh, .....	Slav, .....	Oiler, .....	31	M. Forest City, .....	Susquehanna, .....
27	Envis Ballasi, .....	Hungarian, .....	Laborer, .....	18	S. Storrs No. 2, .....	Lackawanna, .....
7	Peter Manley, .....	Irish, .....	Laborer, .....	50	M. Coal Brook, .....	Lackawanna, .....
10	Frank Petroski, .....	Pole, .....	Miner, .....	35	M. Ontario, .....	Lackawanna, .....
12	Walter White, .....	American, .....	Miner, .....	38	M. Marvine, .....	Lackawanna, .....
13	William Priestly, .....	Irish, .....	Driver, .....	15	S. Coal Brook, .....	Lackawanna, .....
19	John Onoskavich, .....	Slav, .....	Miner, .....	40	M. Johnsons, .....	Lackawanna, .....
26	Pat. H. Collins, .....	Irish, .....	Engineer, .....	55	M. Jermyn, .....	Lackawanna, .....
28	John Gulden, .....	American, .....	Driver, .....	17	S. No. 1, .....	Lackawanna, .....

{ While Muldoon was "working out" some loose coal at face of chamber a fall of rock occurred and injured them.  
 Face and hands burned by an explosion of gas.  
 While walking up a plane, he stepped out of the way of one trip in the way of the other, and was severely bruised.  
 While preparing powder for a blast, he dropped a lamp on his "box," and in handling the powder some of it fell on the flame, and this ignited that which he had in his hands, burning them and his face very severely.  
 Hand crushed while spragging a car.  
 While trying to block a car with a sprag, it ran over his hand.  
 Explosion of blast.  
 Foot crushed by slipping into machinery.  
 Injured by fall of rock.  
 Lacerated between cars.  
 While drilling a hole at face of chamber a piece of rock fell and his arm was broken.  
 Skull fractured by explosion of blast.  
 Injured by cars.  
 Explosion of powder while he was trying to force it to the back of a hole with a drill.  
 While oiling conveyors, he fell and fractured his collar bone and "rib."  
 Squeezed between car and "rib."





# Second Anthracite District.

LACKAWANNA COUNTY.

Scranton, Pa., February 17, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of presenting my report as Inspector of Mines for the Second Anthracite District for the year 1901, as required by section 9, article 2, anthracite mine law 1891, etc. It contains the usual statistics, with some additions. The accidents which occurred in the district during the year are in tabulated form.

Respectfully submitted,

H. O. PRYTHERCH,

Inspector.

TABLE A—Production of Coal in Tons, 1901.

Name of Company.	Tons.
Delaware, Lackawanna and Western Railroad Company, .....	4,271,501
Austin Coal Company, .....	18,892
Delaware and Hudson Company, .....	588,273
The Hudson Coal Company, .....	191,626
Scranton Coal Company, .....	1,182,540
Green Ridge Coal Company, .....	169,889
Pennsylvania Coal Company, .....	336,719
William Connell & Company, .....	134,649
Connell Coal Company, .....	384,524
John and Joseph J. Jermyn, .....	456,476
Elliott McClure & Company, .....	207,322
A. D. & F. M. Spencer, .....	102,669
Nay Aug Coal Company, .....	56,406
Gibbons Coal Company, .....	19,230
North American Coal Company, .....	237,321
Bowen Coal Company, .....	10,233
Bulls Head Coal Company, .....	29,128
Carbon Coal Company, .....	18,474
People's Coal Company, .....	152,543
Spring Brook Coal Company, .....	85,645
Total, .....	8,674,060
The total production was made up as follows:	
Shipped by railroad to market, .....	7,938,312
Sold at mines for local use, .....	527,223
Consumed to generate steam, etc., .....	208,525
Total, .....	8,674,060

TABLE B—Number of Fatal Accidents and Tons of Coal Produced for Each Accident.

Names of Companies.	Number of fatal accidents.	Number of tons of coal produced per life lost.
Delaware, Lackawanna and Western Railroad Company, .....	27	158,206
Austin Coal Company, .....	3	18,892
Delaware and Hudson Company, .....	3	199,424
The Hudson Coal Company, .....	11	63,875
Scranton Coal Company, .....	2	107,503
Green Ridge Coal Company, .....	3	84,944
Pennsylvania Coal Company, .....	3	132,239
Wm. Connell and Company, .....	1	134,649
Connell Coal Company, .....	3	192,262
John and Joseph J. Jermyn, .....	3	152,158
Elliott, McClure & Company, .....	3	69,107
A. D. & F. M. Spencer, .....	1	102,669
Nay Aug Coal Company, .....	2	28,203
Gibbons Coal Company, .....	1	19,230
North American Coal Company, .....	1	237,321
Bowen Coal Company, .....	1	10,231
Bulls Head Coal Company, .....	1	29,128
Carbon Coal Company, .....	1	18,474
People's Coal Company, .....	2	76,271
Spring Brook Coal Company, .....	1	35,645
Total and average, .....	63	137,683

TABLE C—Showing the Number of Fatal and Non-Fatal accidents and the Number of Tons of Coal Produced per Accident.

Names of Companies.	Number of accidents.	Number of tons of coal produced per accident.
Delaware, Lackawanna and Western Railroad Company, .....	123	33,914
Austin Coal Company, .....	3	18,892
Delaware and Hudson Company, .....	12	41,523
The Hudson Coal Company, .....	12	15,969
Scranton Coal Company, .....	43	27,501
Green Ridge Coal Company, .....	3	56,629
Pennsylvania Coal Company, .....	10	39,672
William Connell & Company, .....	2	67,321
Connell Coal Company, .....	7	54,952
John and Joseph J. Jermyn, .....	9	50,718
Elliott, McClure & Company, .....	7	29,618
A. D. & F. M. Spencer, .....	2	51,335
Nay Aug Coal Company, .....	2	14,101
Gibbons Coal Company, .....	1	19,230
North American Coal Company, .....	1	237,321
Bowen Coal Company, .....	1	10,233
Bulls Head Coal Company, .....	1	29,128
Carbon Coal Company, .....	1	18,474
People's Coal Company, .....	6	25,424
Spring Brook Coal Company, .....	6	5,940
Total and average, .....	249	34,876

TABLE D—Classification of Accidents.

	Killed or fatally injured.	Percentage.	Injured.	Percentage.	Total accidents.	Percentage.
Falls of roof and coal, .....	30	47.6	71	38.2	101	40.6
Explosions of gas, .....	3	4.8	15	8.1	18	7.2
Explosions of blasts, .....	5	7.9	20	10.8	25	10.0
Mules, .....	1	1.5	1	.5	1	.4
Cars, inside, .....	11	17.5	46	24.7	57	22.4
Cars, outside, .....	6	9.5	9	4.8	15	6.0
Falling down shafts, .....	4	6.3	7	3.8	4	1.6
Breaker machinery, .....	3	3.2	7	3.8	9	3.6
Miscellaneous, inside, .....	2	3.2	11	5.9	13	5.2
Miscellaneous, outside, .....	2	3.2	6	3.2	6	2.5
Total, .....	63	100	186	100	249	100

TABLE E—Occupations of Persons Killed and Injured.

	Killed or fatally injured.	Percentage.	Injured.	Percentage.	Total accidents.	Percentage.
Miners, .....	26	41.3	62	33.3	88	35.3
Laborers, .....	16	25.4	44	23.6	60	24.1
Door boys, .....	1	1.6	10	5.4	11	4.4
Drivers, .....	2	12.7	24	12.9	32	12.9
Laborers, outside, .....	7	11.1	16	8.6	23	9.2
Company men, inside, .....	3	4.8	3	1.6	6	2.4
Footmen, .....	1	1.6	3	2.1	4	1.6
Pumpmen, .....	1	.5	1	.5	1	.4
Fire bosses, .....	1	.5	1	.5	1	.4
Runners, .....	10	5.3	10	5.3	10	4.0
Slate pickers, .....	1	1.6	6	3.2	7	2.8
Driver bosses, .....	3	4.8	3	1.6	6	2.4
Mine foremen, .....	3	4.8	3	1.6	6	2.4
Mechanics, .....	2	3.2	2	1.1	4	1.6
Total, .....	63	100+	186	100+	249	100—

TABLE F—Nationalities of Persons Killed and Injured.

	Welsh.	English.	Scotch.	Irish.	Poles.	Slavs.	Americans.	Hungarians.	Italians.	Germans.	Lithuanians.	Greeks.	French.	Austrians.	Total.
Killed, .....	6	3	1	18	15	1	7	2	3	3	2	...	1	1	63
Injured, .....	26	13	1	31	41	3	47	1	7	10	2	1	...	...	186
Total, .....	32	16	2	52	56	4	54	3	10	13	4	1	1	1	249



Table showing the condition of the ventilation of the Second Anthracite District during December, 1901.

Names of Mines.	Names of Operators.	Number of fans.	Diameter of fans—feet.	Number of splits of air.	Number of persons on splits.	Cubic feet of air in Inlet.	Cubic feet of air at face of workings.	Cubic feet of air at outlet.
Archbald, .....	Delaware, Lackawanna and Western R. Co., ..	1	16	7	290	146,500	132,350	150,000
Bellevue shaft, .....	Delaware, Lackawanna and Western R. Co., ..	2	16, 14	14	479	214,019	130,572	243,174
Bellevue slope, .....	Delaware, Lackawanna and Western R. Co., ..	1	9 1/2	2	33	48,840	30,862	51,781
Brishin, .....	Delaware, Lackawanna and Western R. Co., ..	1	12	8	228	143,080	121,290	117,002
Cayuga, .....	Delaware, Lackawanna and Western R. Co., ..	1	12	10	379	138,000	116,250	120,200
Stoan, .....	Delaware, Lackawanna and Western R. Co., ..	1	12	5	161	51,625	49,610	72,205
Central, .....	Delaware, Lackawanna and Western R. Co., ..	1	14	9	178	104,829	67,771	110,200
Dodge, .....	Delaware, Lackawanna and Western R. Co., ..	1	14	8	272	123,173	96,515	111,673
Tripp shaft, .....	Delaware, Lackawanna and Western R. Co., ..	1	16	8	310	141,455	105,420	178,000
Tripp slope, .....	Delaware, Lackawanna and Western R. Co., ..	3	14, 14, 16	8	232	218,210	193,570	229,560
Tripp drift, .....	Delaware, Lackawanna and Western R. Co., ..	1	14	3	134	55,140	40,440	60,000
Hyde Park, .....	Delaware, Lackawanna and Western R. Co., ..	1	16	3	103	42,500	26,400	50,000
Hamville, .....	Delaware, Lackawanna and Western R. Co., ..	1	16	6	286	111,955	96,486	101,182
Hampton, .....	Delaware and Hudson Company, .....	2	20, 21	11	324	173,240	146,174	190,830
Pine Brook, .....	Delaware, Lackawanna and Western R. Co., ..	1	12	1	130	89,565	83,157	92,114
Pine Brook, .....	Delaware, Lackawanna and Western R. Co., ..	1	14	10	422	112,188	122,181	144,575
Taylor shaft and drift, .....	Delaware, Lackawanna and Western R. Co., ..	1	14	9	305	125,285	112,905	138,242
Austin tunnel, .....	Delaware, Lackawanna and Western R. Co., ..	1	12	3	48	45,080	28,200	48,800
Dickson, .....	Austin Coal Company, .....	3	20, 20, 20	12	448	285,000	213,100	293,000
Von Storch, .....	Delaware and Hudson Company, .....	1	22	10	307	155,330	151,120	187,200
Fine Brook, .....	Seranton Coal Company, .....	1	17, 17	9	378	143,180	129,240	152,390
Capouse, .....	Seranton Coal Company, .....	2	20, 18	8	294	124,000	123,000	140,000
Mount Pleasant, .....	Seranton Coal Company, .....	2	20, 15	10	304	121,810	110,010	128,950
West Ridge, .....	Seranton Coal Company, .....	1	20	5	146	90,080	66,900	93,900
No. 5 shaft, .....	Pennsylvania Coal Company, .....	1	20	7	288	159,213	99,658	247,216
Old Forge No. 1, .....	Pennsylvania Coal Company, .....	1	20	7	190	101,120	90,000	113,600
Old Forge No. 2, .....	Pennsylvania Coal Company, .....	1	20	5	269	81,644	74,716	123,340
Old Forge No. 3, .....	Pennsylvania Coal Company, .....	1	17	2	18	46,300	41,000	50,000
No. 4 tunnel, .....	William Connell & Company, .....	1	11	2	16	48,300	45,023	70,500
National, .....	William Connell & Company, .....	1	14	3	118	58,910	54,322	64,900
William A., .....	Connell Coal Company, .....	1	18	3	219	88,500	76,700	97,100

Lawrence shaft and drifts, .....	Connell Coal Company, .....	1	16	4	104	119,760	113,940	61,500
Greenwood, New, No. 1, .....	The Hudson Coal Company, .....	Nat. vent.	17	3	111	39,400	35,700	42,900
Greenwood, Old, No. 1, .....	The Hudson Coal Company, .....	Nat. vent.	.....	2	85	29,000	27,600	31,600
Greenwood, New connecting vein, .....	The Hudson Coal Company, .....	Nat. vent.	.....	1	16	6,500	5,300	8,500
Greenwood No. 12 drift, .....	The Hudson Coal Company, .....	Furnace.	.....	1	26	14,500	13,500	15,000
Greenwood No. 8 drift, .....	The Hudson Coal Company, .....	Furnace.	.....	1	34	18,500	17,550	19,600
Greenwood No. 3 drift, .....	The Hudson Coal Company, .....	Nat. vent.	.....	1	10	11,600	10,100	11,540
Greenwood No. 32 drift, .....	The Hudson Coal Company, .....	Furnace.	.....	1	10	5,000	4,510	6,000
Greenwood No. 2 shaft, .....	The Hudson Coal Company, .....	Furnace.	.....	3	104	49,320	38,260	42,130
Greenwood No. 2 shaft, .....	The Hudson Coal Company, .....	Nat. vent.	17	1	47	12,600	12,000	12,900
Green Ridge, .....	Green Ridge Coal Company,* .....	.....	.....	.....	.....	.....	.....	.....
Jermyn No. 1 and 3, .....	John and Joseph J. Jermyn, .....	2	14, 18	8	421	109,085	105,127	114,075
Jermyn No. 2, .....	John and Joseph J. Jermyn, .....	1	.....	8	335	89,771	79,411	92,969
Sibley, .....	Elliot, McClure & Company, .....	1	18	3	172	59,000	46,150	60,700
Spencer, .....	A. D. and F. M. Spencer, .....	1	14	6	123	79,470	68,885	84,635
Nay Aug slope, .....	Nay Aug Coal Company, .....	1	14	2	53	34,200	10,200	24,300
Bulls Head shaft, .....	Bulls Head Coal Company, .....	Nat. vent.	12	4	51	26,000	28,000	31,000
Oxford shaft, .....	People's Coal Company, .....	1	.....	5	245	64,000	53,000	79,500
Spring Brook, .....	Spring Brook Coal Company,* .....	.....	16	.....	.....	.....	.....	.....

\*Not operating on December, 1901.

## Remarks.

In the tabulation of accidents for the year 1901, I have adhered to the same classification as in past years, with the addition of a percentage column to Tables D and E. For instance, in the Table D which gives the classification of accidents in fatal and non-fatal—as to their causes—"falls of roof," "explosions of gas," etc., etc., the percentages have been figured out and are given in a column following that in which the number of fatal, non-fatal, and total accidents are given, thus: "Falls of roof and coal" are responsible for thirty fatal accidents, which is 47.6 per cent. of the total number of fatal accidents; seventy-one non-fatal accidents, which is 38.2 per cent. of the total number of non-fatal accidents, and 101 accidents fatal and non-fatal, which is equal to 40.6 per cent. of the whole accidents for the year. This explanation of Table D will also explain Table E, in which the accidents are classified in a similar manner, but having reference to the occupations of the persons killed or injured. In this form the results in the several years are made more comparable.

## Comparison.

Year.	Fatal.	Non-fatal.	Total accidents.
1900, .....	55	150	207
1901, .....	63	186	249

Thus in 1901 there is an increase of eight fatal and thirty-four non-fatal accidents. When the number of accidents is taken into account, the results obtained in 1901 are much less favorable than those of 1900.

In order to arrive at a fair and judicious comparison of the work accomplished in the two years named, the number of days worked in each, the total production of coal in each year must be considered.

In the year 1900, there was a total production of 6,429,112 tons of coal which was 116,891 tons for each life lost, and 31,058 tons for each accident.

In the year 1901, 8,674,060 tons of coal were produced, which was 137,683 tons for each life lost, and 34,876 tons for each accident.

Thus it will be seen that 20,792 tons more coal was produced per life lost, and 3,818 tons more coal per accident in 1901 than in 1900. So it is fair to conclude that mining in this district has resulted in

fewer casualties in proportion to the work done in 1901, than in 1900.

Inasmuch as it is desirable to reduce the number of accidents to a minimum, I will endeavor to trace the increased number of accidents to the causes from which they occurred. It is a remarkable fact that not a single accident occurred during the year by which more than one life was lost. In former years when an increase in the number of accidents was reached, it had been explained in most instances by the occurrence of extraordinary accidents by which a number of lives had been lost at one time. Particularly is this true of the district in the year 1897, which will be seen by reference to the report for that year.

With reference to the increase in the number of non-fatal accidents, it is noticeable that mine officials have shown a tendency to report the slightest injuries, for reasons which are known to themselves.

The law requires accidents resulting in the death or serious injuries of persons, only to be reported. Article 14, section 1, anthracite mine law, 1891. During the year a number, probably equal to the increase under this head have been reported, which were not serious by any means, and therefore should not have been returned to this office. All accidents reported from the mines of the district are placed on record in the annual report indiscriminately.

If Table E for 1900 and 1901 be compared, it will be noticed that the increase in the fatal column affects the outside laborers more than those of any other occupation. In this item an increase of five is recorded. I cannot fail to invite attention to the fact that the conditions affecting the safety of this class of workmen are practically stationary, more so than any other in or about the mines. The handling of railroad cars from a point above the breaker, to the breaker loading the same, and passing them over the scale, is perhaps attended with as little danger as any work to be performed in the mining and preparing of coal for market, still under this head there is a marked increase in the number of fatalities. The work of handling cars outside with the help of daylight and unlimited space is comparatively easy and safe, as compared with the work of handling cars inside the mine by the help of artificial light and limited space, with other sources of danger which are not present outside. The same conclusions are forced upon us when we compare the safety of the conditions surrounding persons doing general work outside and inside the mine.

Another fact bearing upon this subject and which cannot be overlooked, is that cars inside are handled by the help of mules driven by boys, while the cars outside which are responsible for the increase, are run slowly by gravity, and under the control of men of mature years; and for every car moved a short distance outside, a



large number of cars are moved inside the mine for long distances. The attention of the outside foremen and superintendents of the district are particularly invited to this matter with the view of emphasizing the necessity of employing men who are known to be competent and careful to do this class of work, and thus help to reduce the number of accidents.

Probably on account of the safety of the work, too little care in the selection of persons to perform it has been exercised in the past, and thus the proportion of fatalities is increased.

### Objects of the Mine Law of 1891.

Inasmuch as the principal object of the mine law of 1891 is to provide for the health and safety of persons employed in and about the anthracite coal mines of Pennsylvania, and for the protection and preservation of property connected therewith, I propose to confine my remarks in the remainder of this report to those points.

In regard to the property connected with the industry of coal mining in the district, little destruction is to be reported for the year. The Green Ridge Coal Company's breaker, formerly located on Washington avenue, in the city of Scranton, was completely destroyed by fire on December 2, 1901. The work of rebuilding a new structure on the old site is now progressing. Apart from this instance there was no other destruction of property.

The health and safety of the persons employed in and about the mines deserves particular attention. This topic has been the subject of the reports of the several mine Inspectors of the State since the enactment of the first law relating to mining, and it is difficult to conceive of any phase of the subject, but that it has received more than a passing remark. Inasmuch as the health and safety of persons working in the mines continue to be affected by the same foes year after year, it is only natural that the same features crop up in the annual reports of the region.

In full view of the results of the year's labors, I fail to see that any revolutionary measures can be suggested as a prevention of accidents in the future. They are not the result of any new methods of mining that have been adopted; neither are they the result of clinging to old or antiquated methods. The manner in which each class performs its particular duty, and the precautions against danger continually employed, are of the greatest importance in this district; and the defects in this direction as revealed by the investigations of the several accidents, will be indicated, and some suggestions made.

### Falls of Roof and Coal.

Commencing with the class of accidents which is responsible for the greatest number, namely "falls of roof and coal," thirty lives were lost and seventy-one persons injured, making a total of 101. If the question is asked: "How do these accidents occur?" you would not hesitate to answer by saying that a number of them cannot be foreseen, guarded against, or prevented by ordinary or even extraordinary precautions, because of exceptional conditions, such as the formation of false slips, the existence of "bells" concealed from view in different ways. Still the accidents which would result from these exceptional causes would be small in comparison with the record of this year, if all those which were accompanied by discoverable signs of danger could have been avoided.

Following the accidents of this latter class, my investigations proved clearly that they occur owing to too little vigilance on the part of the miner; in other words, the necessary examinations of the roof before starting to work, and after every blast fired, are either not made with care, or the indications obtained from such examinations are not properly heeded.

### Timber Dislodged by Flying Coal from Blasts.

A common occurrence in the blasting of coal is the dislodgement of props and other timbers which are stood for the express purpose of supporting the roof at or near the working "face." When this occurs there is a tendency on the part of the miner to call his laborers to assist him in the work of re-standing the dislodged timber at once, and while they are so engaged, the roof which was formerly supported by the timber, falls, and in most of such cases a fatal accident results.

I cannot suggest any better or more effective precautions against accidents of this class, than the old rule, namely: The roof to be thoroughly examined before commencing work, and after the smoke of every blast has been swept away, any part which is found to be unsafe or even doubtful to be taken down immediately or secured before work is resumed; in the case of dislodged timber sufficient time should be permitted to elapse, for any fall of roof which might follow the removal of the timber, to take place, before men commence work at the face. I am well aware that every miner will acknowledge the reasonableness of these simple precautions, and furthermore, they are well known. Why is it so difficult to enforce a strict compliance with such simple precautions? The miner alone can answer the question.

### Cars Inside.

The next cause of mine accidents to falls of roof and coal in order of importance is by "cars inside." The greater number of these accidents is the result of drivers persisting in riding on the bumpers of cars while they are in motion, and sliding one foot on the rail, sometimes to hold the car back while descending slight down-grades, and at other times as the force of habit. Any irregularity in the rail on which the foot is sliding, such as a "bad" joint, etc., results in the driver being thrown under the moving train. The derailling of trains of mine cars, the attempt on the part of the driver or miner to pass moving cars on the narrow side of the road, all assist to swell the number of casualties from this cause. I have no remedy to offer which promises as much protection to the younger persons employed in the mines, as the providing of good tracks kept well drained and cleaned, with all the space possible reserved on both sides of the road, and wide doors, with a rule strictly enforced which would prohibit all persons from riding on the bumpers of cars. During 1901, eleven persons were killed and forty-six injured by cars inside. I therefore feel justified in calling particular attention to the manner in which the accidents occur, as well as to the remedy suggested as a means tending to reduce the number in future.

### Explosions of Blasts.

Five persons were killed and twenty injured by blasts. The total number of accidents from this source is the same as that for the preceding year with the difference that there is an increase of four of those which terminated fatally. The practice of preparing two or more blasts in the same place and firing more than one at the same time is a dangerous one. The practice of preparing blasts in adjoining places and firing them at the same time should be avoided. It frequently happens that when blasts are prepared in adjoining places, the miners retreating to the same place of safety at some distance from the "face," when one shot explodes some time before the other, a mistake is made as to which shot has exploded; when the miner who claims that his blast has "gone off" is returning to see the result, he is met by the flying coal, and discovers that his neighbor's blast was the first to explode. If he has reached a point close to the site of the charge, a fatality is the result.

It should also be stated that the injudicious handling of powder and high explosives in charging blasts has also added its quota to the list. The shortening of squibs resulting in premature blasts has not been so noticeable of late. The tendency to return to the "face" on the supposition that the shot has "missed" has lured many an ex-



perienced miner to a dangerous situation with serious consequences. The several defects pointed out suggest plainly the remedies to be applied.

### Explosions of Gas.

The fatalities from explosions of gas in the district during the year have resulted in most cases from the victims passing over danger marks properly erected to warn them to keep away. It is a violation of the provision of the mine law, see General Rule 25.

"Any person or persons who shall knowingly or wilfully \* \* \* enter a place in or about a mine against caution \* \* \* shall be guilty of an offence against this act."

Those who so violated in this respect paid the penalty with their lives. The greater number of the non-fatal accidents from explosions of gas can be explained only by the fact that boys who are allowed to attend doors which control the air currents are prone to leave their posts to run around after mules with the drivers, leaving the doors open in the meantime, which results in the air current being diverted from some important point, probably the face of an advancing gangway, where an explosive accumulation takes place and an explosion and an accident follow. Some of the foremen appeared until lately to treat this matter lightly, and had no stringent measures in force to remedy the evil. Very important doors in the mine should be in charge of older men, who would better realize the importance of proper attention to their simple duties.

Another matter which is entirely under the control of the higher officials of the mines should be mentioned in this connection, and which has added to the list of accidents from explosions of gas. When contracts for rockwork to be done in the mines are let to outside parties, and for which dynamite is to be used, a limit should be inserted in the contract as to the charges to be fired at one time. It will be understood that I am calling attention to cases in which contract work in rock is being executed in fiery mines in actual operation. The explosion of heavy charges of high explosives is known to shatter important wall stoppings, doors, shaft brattice, and overcast air bridges, some of which are located in out-of-the-way situations, resulting in diverting the air currents, the accumulation of explosive mixtures, and finally in an explosion of gas. It is useless to expect the morning examination of the workings by the assistant foreman to act as a safeguard for accidents from this source, as the cause and result are accomplished in a short space of time, and this while the mine is actually working. Contractors are interested in the execution of their own particular work, and not in the general safety of the mine. This is the responsibility which rests on the mine officials and which demands particular attention on their part.

### "Falling Down Shafts."

Four deaths have resulted from this source during the year, under the following circumstances:

An alien who had worked in the mines but a few days, on reaching the foot of the shaft after "all over," signalled for the cage. The cage not being lowered at once, it appears probable that the victim attempted to climb the buntons of the shaft, to be met by the descending cage.

In the second case the victim, with others, was engaged taking off pipes which were lowered by the use of a rope in a supply shaft, and undertook to ascend the shaft by standing on a stick pushed through the main link of the chain at the end of the rope. He fell and was instantly killed. The main shaft with cages properly equipped, and but 200 feet distant, was at the disposal and use of the victim.

In the third case, in the morning a cage was loaded with ten men ready to descend. After the signal to lower had been given to the engineer, one of the ten men stepped out of the cage and was struck by the bonnet of the cage, which caused him to fall into the shaft.

In the fourth case the work of changing a cage at a hoisting shaft was being done. A platform had been placed over the mouth of the shaft, but by some oversight the platform collapsed, precipitating one man into the shaft.

If ordinary judgment had been exercised by the victims in the three first cases it would not be my duty at this time to call attention to the circumstances attending their deaths. Notice is made of these at length, to warn others not to take such risks in future.

The lesson taught by the fourth case is that, in all cases in which cages are to be changed in shafts, and also when any work is to be done in shafts, requiring the use of a platform, the greatest care is to be exercised in its construction, and as an extra precaution against accidents, double platforms should be provided, that is, one platform a few feet below the other.

The greater number of the accidents covered by this report are attributed to the causes which I have briefly described, and when it is considered that sixty-three lives were lost, and 186 persons injured, even if the result is more gratifying than that of the preceding year, when the tonnage is taken into account, the fact remains, that much loss and suffering is inflicted on the underground worker, and if I am permitted to say as the result of the experience gained in the work of inspecting the mines and investigating the accidents of the year, I am more than ever of the opinion that the most effective preventative against their occurrence would be a combined effort on the part of all concerned, and this combined effort on the part of all would be made up of precautions that appear small in themselves,



precautions that would incur no greater expense, nor more work—simply a habit of being conscious of the possibility of danger lurking in the vicinity, the application of known means to discover it in due time, to be immediately followed by means calculated to preserve life and limb. I have already pointed out some of those which appear important. If I succeed in attracting the joint attention of mine officials and working men to this very important subject, and to enlist their joint co-operation, much good can be accomplished.

Few if any of the accidents of the year have taken place owing to non-compliance with the law, on the part of the operators, as the inquests held on such as appeared accompanied by some suspicious circumstances failed to establish the fact.

### Fires in Breakers Located Over Shafts.

While the mine law of 1891 provides for a specified distance to be maintained between the breaker and the shaft or slope, there are still a number of breakers in the district that were erected before the present law was enacted, which are located over the opening. In the report for the year 1897, attention was called to the necessity then evident, of planning a course of action in case of a fire in the breaker situated over the opening connecting the surface with the underground workings. I invite the attention of superintendents and other mine officials to this subject again. The matter has been commented upon during my inspections, and while precautions have been taken in many instances, these are not general. While no accident has occurred during the year from this cause, I feel justified in recommending to the operators that a well defined plan be adopted, and a sufficient number of persons made acquainted with the detail of its manipulations, so that the persons employed inside may be immediately withdrawn along safe avenues in case of a destructive fire in the breaker.

By the adoption of these recommendations the double object of the mine law will to some extent be accomplished.

### Condition of the Mines.

The general condition of the mines of the district will compare favorably with their conditions at the time the report for 1900 was made. The workings in the developed veins are continually being extended, as the total production for the year indicates, and in addition other veins are being developed. Thus the extent of the territory to be guarded and ventilated is increasing from year to year. A table has been prepared from the monthly report of air measurements, which shows the condition of ventilation in all the mines

in the district. In this table the type of ventilator in use is given, its dimensions, the number of splits of air, the total number of persons regularly employed on the splits, with the quantity of air in cubic feet in the inlet, face of workings, and in the outlet, and which will show that the ventilation of the mines as a whole is good.

### The New Law and the Manner in which its Provisions are Respected.

On November 29, 1901, "An act relating to Anthracite mines and providing for the care and life, and attention of employes injured in and about said mines," and known as No. 212, became effective. During the remainder of the year my particular attention was directed to the several operators, to ascertain the manner in which they would comply with the provisions of the new law. With this object in view, and in order that the subject should be covered in this report, a strenuous effort was made to visit as many of the mines as possible. Forty mines were visited, and in five cases only had the hospital or medical room in the mine not been commenced. The excuse offered for not having already complied with the requirements of the law, was the difficulty attending the selection of the most convenient location in mines in which a number of veins are being worked and where the workings are much scattered. The superintenden in each of these cases was urged to proceed with the work at once or suffer the penalty imposed by the law. By this time the work has been reported in most of the cases. In the other mines—thirty-five in number—the medical room was provided, equipped and in working order. The list of supplies to be provided as set forth in section one of the act, is supplemented with others, which makes the list more complete to meet the varied cases that will need treatment.

In connection with the medical rooms, a number of operators have secured the services of a competent surgeon to instruct the foremen at the mines as to the treatment to be administered by them, as well as on general ambulance work, the foremen being required to instruct their assistants and other persons employed in the mines under their charge in the same manner. Much benefit to the injured is expected to accrue from the adoption of this plan.

### A New Departure.

I am pleased to notice that the ambulances used to convey the injured from the mines to their respective homes or the hospital are now being heated by carriage heaters, thus adding to the comfort of the injured. This good and humane provision—which is voluntary—has not as yet become general, but is an indication that the operators are not altogether void of kindly feeling towards their employes. Mr. E. E. Loomis, Superintendent of Mining, Delaware,

Lackawanna and Western Railroad Company, introduced the first heaters into mine ambulances.

### Other Fatalities.

In addition to the fatalities resulting from accidents which have been regularly tabulated, as required by law, the following list which is attributed to other causes is to be noticed:

On June 5, 1901, David R. Thomas, nineteen years of age, employed as driver in the Archbald mine, received injuries while at work, from which he died. The coroner's jury rendered the following verdict: "Thomas came to his death as a result of a blow received on the head by some blunt instrument in the hands of Tomasafski." Tomasafski has been on trial in the Lackawanna court on the charge.

On September 6, 1901, John Worthington, a laborer, sixty-two years of age, employed in Old Forge No. 2 shaft, died from apoplexy.

On November 29, 1901, George Doyle, a laborer, seventy years of age, employed in the William A. mine, died from natural causes while he was on his way out of the mine.

### Mine Foremen's Examination.

The regular annual examination of candidates for foremen's certificates was held in the City Hall, Scranton, Pa., August 19th and 20th, 1901. The following persons were recommended to the Secretary of Internal Affairs, Harrisburg, Pa., to receive mine foremen's certificates: Julian Cooper, Job Whitehouse, Tallie F. Jones, John A. Morgan, Evan C. Davies, C. Grosspictoch and James Regan.

Forty persons were recommended to receive certificates as assistant foremen.

### Improvements.

Only a part of the improvements made in the mines of the district have been reported this year.

The Connell Coal Company has remodeled the Lawrence breaker, and constructed an addition, which is equipped with jigs. This plant is to be used for preparing coal from the Babylon colliery of the Temple Iron Company, and also from the Lawrence workings of the Connell Coal Company.

A rock plane was driven at William A. colliery from the Clark to the Marcy vein, a total distance of 140 feet. This is used for letting the Marcy vein coal down to the Clark vein.

The Delaware, Lackawanna and Western Railroad Company reports the following:

The new Hampton boiler plant, installed and practically completed in 1901; consists of thirty boilers or units of 313 H. P. each=4,695 H.



P. at 150 pounds pressure, divided into seven and one-half batteries Babcock & Wilcox vertical headed water tube boilers. They are fitted up with McClave & Brooks Automatic Stokers and self-feeding arrangement for fuel from storage pockets, and also have attached the Green Economizers, divided as follows: One for eight batteries and one for seven and one-half batteries, with induced fan draft in connection with forced fan draft. This plant is all under one roof. The steam pipe connections are as follows: To Sloan shaft 1,420 feet of 8 inch pipe. To Central shaft 1,400 feet of 8 inch pipe. To Hyde Part shaft, 3,140 feet of 8 inch pipe. To Hampton Shaft, 1,400 feet of 12 inch pipe. To Continental shaft 1,500 feet of 8 inch pipe. The above plant takes the place of ninety-five boilers, cylinders and locomotives. A new reservoir 100 feet in diameter has also been located near the plant which will hold 500,000 gallons of water.

At Pyne shaft a tail rope system of haulage is being installed. Length of main rope 4,000 feet; size of engines 15 feet x 30 feet geared.

Sloan Mine.—A new air shaft has been sunk to the surface vein and a connection driven from the bottom to the upcast compartment of main shaft. A new ventilating fan will soon be erected over this shaft. The fan which is now ventilating the mine and is located at the breaker over the main shaft will be removed, thus reducing the risk from fire, and at the same time doing away with the possibility of the air—which is being exhausted, entering the downcast again.

New Water Shaft.—A new shaft is being sunk at a point between the Central and Sloan shafts. This shaft is 8'x33' in the clear, and will be 500 feet deep. It is to be used to drain the mine workings of the company's Keyser Valley collieries. When the work is finished it is proposed to raise 7,000,000 gallons of water every twenty-four hours, by the use of buckets.

An electric motor system of haulage has been installed in the Dodge mine, and a new steam generating plant erected, at a point between the Dodge and Bellevue breakers. This plant will supply steam to the two mines and breakers.

A new ventilating shaft has been sunk at the Taylor mine from the surface to the Clark vein.

In the Manville shaft of the Delaware and Hudson Company and the Delaware, Lackawanna and Western Railroad Company, and the Delaware, Lackawanna and Western Company's Holden shaft, the old cribbing has been removed and replaced by expanding metal. The work was successfully accomplished in each case, and the result is highly satisfactory.

The improvements made in the several mines in the district are of the usual kind, and as important as the condition of the mine required and the increased output demanded.





TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
The Hudson Coal Co. No. 1 Greenwood: Old No. 1 shaft, ..... New No. 1 shaft, ..... No. 3 drift, ..... No. 10 drift, ..... No. 12 drift, ..... No. 13 drift, .....	Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna, Lackawanna.	C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose, C. C. Rose.	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton.	E. R. Pettibone, E. R. Pettibone, E. R. Pettibone, E. R. Pettibone, E. R. Pettibone, E. R. Pettibone, E. R. Pettibone.	Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton.	Delaware & Hudson R. R., Delaware & Hudson R. R., Delaware & Hudson R. R., Delaware & Hudson R. R., Delaware & Hudson R. R., Delaware & Hudson R. R., Delaware & Hudson R. R.
No. 2 Glenwood: No. 2 shaft, ..... Drift, .....						
Scranton Coal Co. Pine Brook, ..... Cajouse, ..... Mount Pleasant, ..... West Ridge, .....		John R. Bryden, John R. Bryden, John R. Bryden, John R. Bryden.	Scranton, Scranton, Scranton, Scranton.	John Van Bergen, John Van Bergen, John Van Bergen, John K. Derkelsen.	Scranton, Scranton, Scranton, Pittsburgh.	Ontario & Western R. R., Ontario & Western R. R., Ontario & Western R. R., Ontario & Western R. R.
Washeries— Cajouse, ..... Mount Pleasant, .....						
Green Ridge Coal Co. Green Ridge slope, .....		W. L. Connell.	Scranton, Scranton.	John F. Cumings, John F. Cumings.	Scranton, Scranton.	Ontario & Western R. R., Ontario & Western R. R.
Pennsylvania Coal Co. No. 3 shaft, ..... Old Forge No. 1 shaft, ..... Old Forge slope, ..... Old Forge No. 2 shaft, .....			Dunmore, Dunmore, Dunmore, Dunmore.	Sidney Williams, Sidney Williams, Sidney Williams, Sidney Williams.	Dunmore, Dunmore, Dunmore, Dunmore.	E. & W. V. R. R., E. & W. V. R. R., E. & W. V. R. R., E. & W. V. R. R.
William Connell & Co. Meadow Run tunnel, ..... National shaft, .....		Col. E. H. Ripple, Col. E. H. Ripple.	Dunmore, Dunmore.	S. T. Jones, S. T. Jones.	Scranton, Scranton.	Del., Lack. & West. R. R., Del., Lack. & West. R. R.
Connell Coal Co. Wm. A shaft, ..... Lawrence shaft, ..... Lawrence, Upper, drift, ..... Lawrence, Lower, drift, .....		S. D. Warriner, S. D. Warriner, S. D. Warriner, S. D. Warriner.	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre.	E. T. Conner, E. T. Conner, E. T. Conner, E. T. Conner.	Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre.	Lehigh Valley R. R., Lehigh Valley R. R., Lehigh Valley R. R., Lehigh Valley R. R.

John and Joseph J. Jermyn. Jermyn No. 1 shaft, .....	Lackawanna, Lackawanna, Lackawanna,	Joseph J. Jermyn, .. Joseph J. Jermyn, .. Joseph J. Jermyn, ..	Scranton, Scranton, Scranton,	..... ..... .....	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	..... ..... .....	Rendham, Rendham, Rendham,	..... ..... .....	N. Y. S. & W. R. R. N. Y. S. & W. R. R. N. Y. S. & W. R. R.
Jermyn No. 3 shaft, .....	Lackawanna, Lackawanna, Lackawanna,	Joseph J. Jermyn, .. Joseph J. Jermyn, .. Joseph J. Jermyn, ..	Scranton, Scranton, Scranton,	..... ..... .....	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	..... ..... .....	Rendham, Rendham, Rendham,	..... ..... .....	N. Y. S. & W. R. R. N. Y. S. & W. R. R. N. Y. S. & W. R. R.
Jermyn No. 2 shaft, .....	Lackawanna, Lackawanna, Lackawanna,	Joseph J. Jermyn, .. Joseph J. Jermyn, .. Joseph J. Jermyn, ..	Scranton, Scranton, Scranton,	..... ..... .....	E. B. Jermyn, E. B. Jermyn, E. B. Jermyn,	..... ..... .....	Rendham, Rendham, Rendham,	..... ..... .....	N. Y. S. & W. R. R. N. Y. S. & W. R. R. N. Y. S. & W. R. R.
Elliott, McClure & Co. Sibley, .....	Lackawanna, Lackawanna, Lackawanna,	James C. McClure, .. A. D. & F. M. Spencer A. J. Hand, Jr., ....	Scranton, Scranton, Scranton,	..... ..... .....	..... H. M. Spencer, .....	..... ..... .....	..... Dunmore, .....	..... ..... .....	Lehigh Valley R. R. E. & W. V. R. R.
A. D. and F. M. Spencer. Spencer shaft, .....	Lackawanna, Lackawanna, Lackawanna,	A. D. & F. M. Spencer A. J. Hand, Jr., .... A. J. Hand, Jr., ....	Scranton, Scranton, Scranton,	..... ..... .....	H. M. Spencer, .....	..... ..... .....	Dunmore, .....	..... ..... .....	E. & W. V. R. R.
Nay Aug Coal Co. Nay Aug slope, .....	Lackawanna, Lackawanna, Lackawanna,	A. J. Hand, Jr., .... A. J. Hand, Jr., .... A. J. Hand, Jr., ....	Scranton, Scranton, Scranton,	..... ..... .....	J. D. Caryl, .....	..... ..... .....	Scranton, Scranton, Scranton,	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
Nay Aug washery, .....	Lackawanna, Lackawanna, Lackawanna,	A. J. Hand, Jr., .... A. J. Hand, Jr., .... A. J. Hand, Jr., ....	Scranton, Scranton, Scranton,	..... ..... .....	J. D. Caryl, .....	..... ..... .....	Scranton, Scranton, Scranton,	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
Gibbons Coal Co. Gibbon mine, .....	Lackawanna, Lackawanna, Lackawanna,	Michael Gibbon, .... H. W. Saums, .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
North American Coal Co. Meadow Brook washery, .....	Lackawanna, Lackawanna, Lackawanna,	H. W. Saums, .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
National washery, .....	Lackawanna, Lackawanna, Lackawanna,	H. W. Saums, .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
Bulls Head Coal Co. Bulls Head slope, .....	Lackawanna, Lackawanna, Lackawanna,	..... ..... .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
People's Coal Co. Oxford, .....	Lackawanna, Lackawanna, Lackawanna,	..... ..... .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
Spring Brook Coal Co. Spring Brook shaft, .....	Lackawanna, Lackawanna, Lackawanna,	..... ..... .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.
Spring Brook slope, .....	Lackawanna, Lackawanna, Lackawanna,	..... ..... .....	Scranton, Scranton, Scranton,	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	Del., Lack. & West. R. R. Del., Lack. & West. R. R. Del., Lack. & West. R. R.

Note.—The Bowen Coal Co. and the Carbon Coal Co. have ceased operation.

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Second Anthracite District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Delaware, Lackawanna and West. R. R. Co.												
Amfield, .....	Lackawanna, .....	306,716	12,980	776	320,466	217	675	4	8	11,739	360	74
Arifield, .....	Lackawanna, .....	291,907	25,581	21,348	341,826	219	785	6	15	10,666	1,000	93
Bethlehem, .....	Lackawanna, .....	212,148	12,000	3,213	237,361	219	529	2	3	8,807	1,401	60
Casalia, .....	Lackawanna, .....	214,290	16,000	6,712	236,921	177	611	2	6	7,450	3,496	62
Shear and Central, .....	Lackawanna, .....	261,729	49,500	1,276	312,565	218	625	1	12	7,947	.....	32
Continental, .....	Lackawanna, .....	214,756	12,113	1,350	228,252	218	498	3	10	7,260	205	47
Decker, .....	Lackawanna, .....	156,355	12,087	215	168,658	145	582	2	4	6,365	255	69
Diamond, .....	Lackawanna, .....	312,726	19,440	5,804	337,379	225	686	1	5	11,038	2,461	84
Hyde Park, .....	Lackawanna, .....	252,801	8,516	16,664	278,171	234	563	1	6	9,705	.....	77
Manville, .....	Lackawanna, .....	51,098	5,167	1,468	57,732	152	429	3	4	7,301	8,422	43
Holben, .....	Lackawanna, .....	.....	.....	.....	.....	.....	38	.....	1	.....	.....	1
Hampton, .....	Lackawanna, .....	142,018	19,604	50	163,772	230	325	1	3	5,094	.....	49
Lyne, .....	Lackawanna, .....	427,777	14,442	2,498	444,715	230	691	1	3	11,474	821	111
Taylor, .....	Lackawanna, .....	258,869	11,407	6,198	282,174	205	649	2	7	10,027	768	72
Total and average, .....		3,132,926	227,176	67,602	3,428,704	206.7	7,579	27	96	114,903	10,262	919
Washeries—												
Pallevue, .....		232,455	.....	.....	232,455	247	46	.....	.....	.....	.....	4
Diamond, .....		300,433	14,609	.....	315,033	259	48	.....	.....	.....	.....	3
Hampden, .....		249,572	.....	.....	249,572	319	53	.....	.....	.....	.....	.....
Oxford, .....		45,767	.....	.....	45,767	207	27	.....	.....	.....	.....	.....
Total and average, .....		828,197	14,609	.....	842,707	258	174	.....	.....	.....	.....	7

Austin Coal Company.	Lackawanna,.....	14,216	3,920	756	18,892	66	87	.....	872	2,700	16
Austin tunnel, .....	Lackawanna,.....	244,029	7,916	3,287	255,232	214	558	.....	8	12,324	57
Delaware and Hailson Co.	Lackawanna,.....	245,932	30,400	3,610	279,942	219	573	3	1	11,242	78
Dickson, .....	Lackawanna,.....	57,104	5,156	829	63,669	*	.....	.....	.....	7,817	.....
Manville, .....	Lackawanna,.....	547,065	43,482	7,726	598,273	216	1,121	3	9	23,566	105
Total and average, .....	Lackawanna,.....	119,108	4,596	1,314	125,018	113	531	1	6	2,289	91
The Hudson Coal Co.	Lackawanna,.....	61,925	4,683	.....	66,608	103	271	2	3	3,369	43
Greenwood No. 1, .....	Lackawanna,.....	181,033	9,279	1,314	191,626	106	862	3	9	6,658	124
Greenwood No. 2, .....	Lackawanna,.....	233,338	16,000	4,836	254,174	172	711	6	6	13,216	73
Total and average, .....	Lackawanna,.....	272,864	14,200	3,407	300,471	180	643	1	7	7,258	82
Scranton Coal Co.	Lackawanna,.....	171,571	16,000	21,565	209,166	177	634	3	17	12,848	41
Pine Brook, .....	Lackawanna,.....	95,444	6,000	5,687	107,081	155	400	1	2	5,869	42
Capoise, .....	Lackawanna,.....	773,217	52,200	35,475	860,892	171	2,388	11	32	89,191	238
Mount Pleasant, .....	Lackawanna,.....	267,217	4,800	.....	272,017	242	66	.....	.....	.....	.....
Washeries—	Lackawanna,.....	44,629	5,000	2	49,621	149	65	.....	.....	.....	.....
Capoise, .....	Lackawanna,.....	311,846	9,800	2	321,648	195	171	.....	.....	.....	.....
Total and average, .....	Lackawanna,.....	132,801	10,000	18,088	160,889	187	510	2	1	7,506	48
Green Ridge Coal Co.	Lackawanna,.....	231,938	8,205	.....	240,143	154	774	2	4	9,688	65
Pennsylvania Coal Co.	Lackawanna,.....	152,286	4,200	.....	156,576	171	398	1	3	6,316	38
Old Forge, .....	Lackawanna,.....	384,224	12,495	.....	396,719	162	1,174	3	7	16,005	103
No. 5 shaft, .....	Lackawanna,.....	116,283	8,500	9,866	134,649	168	393	1	1	2,760	28
Bunker Hill, .....	Lackawanna,.....	116,283	8,500	9,866	134,649	168	393	1	1	4,824	22
Total and average, .....	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	4	7,584	50
William Connell & Co.	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	4	14,137	79
National, .....	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	5	14,137	79
No. 4 tunnel, .....	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	5	14,137	79
Total and average, .....	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	5	14,137	79
Connell Coal Co.	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	4	14,137	79
William A. Lawrence, .....	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	5	14,137	79
Total and average, .....	Lackawanna,.....	360,254	20,000	4,270	384,524	251	784	2	5	14,137	79





Bulls Head Coal Co.	Lackawanna.....	21,149	1,025	6,954	29,128	119	119	1	.....	1,200	550	25
Carbon washery, .....	Lackawanna.....	14,874	3,600	.....	18,474	132	14	.....	.....	.....	.....	.....
Oxford, .....	Lackawanna.....	115,143	8,635	98,765	152,543	158	345	2	4	5,295	50	65
Spring Brook Coal Co.	Lackawanna.....	28,156	5,000	2,489	35,645	151	123	.....	6	1,800	700	15
Grand total, .....	.....	7,938,312	527,223	208,525	8,674,060	371	18,023	63	186	268,529	119,030	2,014

TABLE II—Continued.

	Number of Boilers.			Locomotives.			Total horse power.	Number of steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
	Cylindrical.	Horse power.	Tubular.	Horse power.	Locomotives.									
					Steam.	Electric.								
Delaware, Lackawanna and West, R. R. Co.,	225	8,161	23	4,245	12,406	15	197	14,757	35	28,312	16,205	4		
Del., Lacka. & West, R. R. Co. washeries,			8	329	329		23	829						
Austin Coal Co.,	7	110	1	10	240	1	16	455	1	400	100	1		
Delaware and Hudson Co.,			1	2,100	2,100		55	2,614	3	3,120	2,300			
The Hudson Coal Co.,	22	595	4	410	995	2	29	2,886	7	1,050	885			
Seranton Coal Co.,	12	180	17	2,330	2,510	3	26	3,372	7	4,315	2,700	1		
Seranton Coal Co. washeries,			5	700	710		2	105	5	3,500	3,500			
Green Ridge Coal Co.,	21	55			55		10	1,400	2	640	500	1		
Lackawanna,			12	1,650	1,650	2	30	2,020	4	2,640	1,170		1	
Lackawanna,	18	450	2	170	600	1	8	2,900	3	1,500	1,000			
Lackawanna,	20	1,050	7	240	1,330		16	1,694	3	1,500	1,000	1		
Lackawanna,	24	550	7	1,390	1,940	1	10	1,519	4	3,000	1,000			
Lackawanna,	4		4	350	550		12	1,000						
Lackawanna,	11	275		300	305		12	965	1	500	500			
A. D. and F. M. Spencer,			3	186	189		6	218						
Nay Aug Coal Co.,			1	20	60		3	35						
Gibbons Coal Co.,	1	40	1	30	60		3	35						
North American Coal Co.,			8	680	680		8	320						
Bowen Coal Co.,			4	160	160		2	90						
Bulls Head Coal Co.,	3	52			52									
Carlson Coal Co.,	2	40	2	120	120		5	137						
People's Coal Co.,	2	40	5	750	1,210		6	6	300	3	1,575	750	1	1
Spring Brook Coal Co.,	6	120			120		4	120	4	550	350			
Total and average,	392	12,738	115	15,685	28,273	25	495	32,786	81	52,262	31,770	9	8	

TABLE III—Showing the number of each class of employees at each colliery in the Second Anthracite District, during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Inside foremen or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.		Total outside.
J. L. Lack & West, R. R. Co.		1	3	184	175	61	12	72	58	1	7	2	86	2	47	161	669
Archibald, .....	Lackawanna,	2	5	190	194	81	22	82	378	1	2	1	11	1	71	297	795
Bellevue, .....	Lackawanna,	2	3	145	151	52	12	46	411	1	1	8	16	1	45	118	521
Briston, .....	Lackawanna,	3	5	155	155	63	13	66	455	2	0	9	77	2	57	133	611
Cayusa, .....	Lackawanna,	1	3	79	79	28	16	41	217	1	0	11	79	2	61	139	376
Shan and Central, .....	Lackawanna,	1	3	69	69	35	15	28	231	1	0	7	79	2	61	139	376
Continental, .....	Lackawanna,	2	3	74	75	35	15	28	231	1	0	7	79	2	61	139	376
Dodge, .....	Lackawanna,	1	3	129	129	46	12	55	358	1	6	8	64	2	59	140	488
Diamond, .....	Lackawanna,	1	3	131	131	56	18	60	401	1	6	11	46	1	66	131	532
Dyke Park, .....	Lackawanna,	1	3	176	177	58	37	69	525	1	8	16	66	2	68	161	606
McAlle, .....	Lackawanna,	1	3	134	134	57	18	40	351	1	4	8	65	2	38	118	503
Manville, .....	Lackawanna,	1	5	118	118	47	12	30	331	1	5	11	43	2	36	98	429
Hobbs, .....	Lackawanna,	1	1	1	1	2	.....	8	13	1	1	4	.....	1	18	25	38
Hampton, .....	Lackawanna,	1	2	71	71	24	11	28	208	1	3	11	62	3	37	117	325
Pyne, .....	Lackawanna,	1	4	177	181	71	12	63	512	2	8	9	100	2	61	182	634
Taylor, .....	Lackawanna,	2	.....	171	178	57	17	52	489	1	2	12	78	2	67	169	619
Total and average, .....		23	52	1,916	1,990	738	216	741	5,615	16	78	150	943	28	738	1,953	7,569
Washeries—																	
Bellevue, .....	Lackawanna,	1	.....	.....	.....	.....	.....	6	7	1	1	2	4	1	30	39	46
Diamond, .....	Lackawanna,	.....	1	.....	7	.....	.....	.....	.....	1	2	4	2	2	29	40	48
Hampton, .....	Lackawanna,	.....	1	.....	.....	.....	.....	5	6	1	1	3	5	.....	37	47	53
Oxford, .....	Lackawanna,	1	.....	.....	.....	.....	.....	3	4	1	2	2	.....	2	16	23	27
Total and average, .....		2	2	7	.....	.....	.....	14	25	4	6	11	11	5	112	140	171

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Inside foreman or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.		Total outside.
Austin Coal Co.	Lackawanna.	1	.....	20	20	6	.....	5	52	1	3	4	16	2	9	35	87
Delaware and Hudson Co.	Lackawanna.	2	5	151	151	71	16	55	451	1	8	11	43	2	47	107	558
Dickson.	Lackawanna.	1	4	139	139	87	13	71	464	1	12	13	33	4	56	119	573
Manville.	Lackawanna.	3	9	290	240	158	29	126	905	2	15	24	76	6	103	226	1,131
Total and average, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
The Hudson Coal Co.	Lackawanna.	2	.....	113	127	48	14	29	363	1	10	9	75	1	72	168	531
Greenwood No. 1, .....	Lackawanna.	1	.....	64	68	26	2	19	180	1	7	6	25	1	53	91	271
Greenwood No. 2, .....	Lackawanna.	3	.....	207	195	74	16	48	53	2	17	15	100	2	123	259	802
Total and average, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scranton Coal Co.	Lackawanna.	1	4	169	170	92	48	69	544	1	10	7	83	3	61	157	711
Pine Brook, .....	Lackawanna.	1	3	156	180	82	16	74	512	1	9	7	58	5	51	131	643
Chapman, .....	Lackawanna.	2	17	170	170	66	22	57	480	1	5	9	79	4	43	144	684
Mount Pleasant, .....	Lackawanna.	1	2	50	50	47	18	35	283	1	8	5	51	2	53	117	400
West Ridge, .....	Lackawanna.	5	12	576	610	247	104	285	1,820	4	32	28	271	16	208	550	2,388
Total and average, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*See Delaware, Lackawanna and Western Railroad.

Washeries—	Capitals—	Lackawanna.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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TABLE III.—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.								Occupations of Persons Employed Outside.							Grand total, inside and outside.
		Inside foreman or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.	
Bulls Head Coal Co.	Lackawanna.	1	1	22	24	14	.....	14	76	1	2	2	20	2	16	43	119
Bulls Head slope, .....	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....	9	14	14
Carbon Coal Co.	Lackawanna.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oxford, .....	Lackawanna.	1	2	56	92	40	23	18	262	1	10	6	22	4	40	83	345
Spring Brook Coal Co.	Lackawanna.	1	.....	30	24	12	1	8	76	1	2	6	24	3	11	47	123
Grand totals, .....	.....	60	35	4,589	4,459	1,854	420	1,655	13,141	48	228	363	2,115	104	2,024	4,882	18,029



TABLE IV.—List of fatal accidents that occurred in and about the mines of the Second Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 4	John Morgan, .....	English, ....	Laborer, ...	48	M.	1	2	Bellevue shaft, .....	Lackawanna,	Killed by a piece of top coal which fell from the edge of a wall in a chamber in the Big vein.
7	Daniel Jones, .....	Welsh, .....	Breaker boy, 12	S	S	....	....	Capouse breaker, .....	Lackawanna,	His body was found in a conveyor line in the breaker. Life was extinct. An inquest was held by the coroner.
9	Tim Shea, .....	Irish, .....	Miner, .....	30	S.	....	....	Pine Brook, .....	Lackawanna,	Fatally injured by flying coal from a blast, which was returning to the face of the "catch," the squib. He died the same day.
15	George Peterach, ....	Pole, .....	Miner, .....	40	M.	1	....	Pine Brook, .....	Lackawanna,	Instantly killed by flying coal from a blast fired by his own hand in a chamber in No. 1 Dummore vein.
17	Martin Bartleg, .....	Irish, .....	Miner, ....	28	S	....	....	Pine Brook, .....	Lackawanna,	Instantly killed by falling roof rock; was resting a dislodged prop when the rock struck.
23	John Walsh, .....	Irish, .....	Driver, ....	23	S.	....	....	Bellevue breaker, .....	Lackawanna,	Fatally injured; crushed between a culm car and the wall of the fire room; died the same day.
31	Louis Zegasky, .....	Pole, .....	Miner, .....	35	S.	....	....	Sibley, .....	Lackawanna,	Pulling some roof rock down, which fell on him. He died instantly.
Feb. 4	John Scott, .....	Irish, .....	Miner, .....	40	M.	1	4	Central, .....	Lackawanna,	Was not big enough to pass when a piece of top coal fell on each of the vein and rolled on him.
4	Frank McAvick, .....	Lithuanian, .....	Miner, .....	30	S.	....	....	Cayuga, .....	Lackawanna,	Killed by an explosion of gas. McAvick and his laborer went into abandoned working and exploded the gas.
14	Patrick O'Horo, .....	Irish, .....	Oiler, .....	65	M.	1	....	Green Ridge breaker, .....	Lackawanna,	Struck by an empty car on the trestle leading to the breaker. He fell to the ground and sustained injuries from which he died.
27	John Gallagher, .....	American, .....	Laborer, ...	20	S.	....	....	Nay Aug slope, .....	Lackawanna,	Instantly killed at face of chamber by falling bony. The miner's attention had been called to the condition of the roof, but he failed to secure it.

March 3	Joseph Constantzo, ...	Italian, ...	Laborer, ...	24	S.	....	....	Jermyn No. 3, .....	Lackawanna,	Found dead in sump. There was evidence that the deceased had attempted to climb up the shaft on buntions. Killed while attempting to leave the cage at the surface landing after the sign of a fall had been given. He had instantly killed by a fall. He had neglected to make the necessary examination of the roof after firing a blast.
6	John Beckinick, .....	Pole, .....	Laborer, ...	50	M.	1	4	Payne, .....	Lackawanna,	Killed by top coal. The miner had fired a blast, and he did not make a careful examination after.
9	John Bromskie, .....	Slav, .....	Miner, .....	55	W.	....	3	Jermyn No. 3, .....	Lackawanna,	Was found on the gangway road in an injured condition; fell off the bumper of the car he was driving. He died two days later.
11	Wm. H. Davies, .....	Welsh, .....	Miner, .....	35	S.	....	....	Archbald, .....	Lackawanna,	Instantly killed by fall of rock at narrow chamber.
12	Richard Gallagher, ...	Irish, .....	Driver, .....	16	S.	....	....	Manville, .....	Lackawanna,	Killed by a fall of rock, on narrow side of gangway road in slope.
20	Benj. J. Lewis, .....	English, ...	Laborer, ...	46	M.	1	6	Old Forge No. 1 slope, .....	Lackawanna,	Killed by a fall of rock. He was examining the roof after firing a blast, when the fall took place.
25	Thos. Tinner, .....	American, ..	Driver, ...	16	S.	....	....	Sibley, .....	Lackawanna,	Killed by a fall of roof. The miner had been warned of the condition of the roof. The laborer objected to its being taken down, as he claimed the rock would be in his way.
28	Chas. English, .....	Italian, ...	Miner, ...	38	S.	....	....	Sibley, .....	Lackawanna,	Was returning to the face to light a squib, which he thought had missed. The blast exploded, throwing coal striking him in the tail, resulting in a change the carriage.
April 11	Flora Lisk, .....	American, ..	Laborer, ...	23	M.	1	3	Nay Aug slope, .....	Lackawanna,	The miner had removed two props from under the top coal, which he was taking down, and finding the coal did not come down, he was drilling a hole at the face when the coal fell.
11	Anthony Casper, .....	Lithuanian, ..	Miner, .....	28	S.	....	....	West Ridge, .....	Lackawanna,	Was struck by a piece of coal which fell from the face of his chamber in the Rock vein. He died the same day.
13	Michael Schultis, .....	Hungarian, ..	Headman, ..	28	M.	1	2	Mount Pleasant, .....	Lackawanna,	Instantly killed by fall of rock at a point 60 feet back from the face of the chamber, while the miner was examining the roof after a blast.
26	Thomas E. Williams, ...	Welsh, .....	Miner, .....	54	S.	....	....	Bellevue shaft, .....	Lackawanna,	Long was examining out some coal at the face of a gangway when a slab of rock fell, instantly killing him.
May 4	John Walsh, .....	American, ...	Miner, .....	28	S.	....	....	Continental, .....	Lackawanna,	Died from injuries received by a fall of roof at face of a gangway in the Big vein.
4	John Rostar, .....	Austrian, ...	Laborer, ...	20	S.	....	....	Green Ridge slope, ....	Lackawanna,	
8	Thomas Loughney, ...	Irish, .....	Laborer, ...	50	S.	....	....	Pennsylvania No. 5, ...	Lackawanna,	
17	Frank Barowskie, ...	Pole, .....	Laborer, ...	18	S.	....	....	Dodge, .....	Lackawanna,	



TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
24	George Watson, .....	Scotch, .....	Shaft man, .....	48	M.	1	5	Manville, .....	Lackawanna,	Was engaged on a platform in the supply shaft. The engineer lowered the carriage without a signal. It struck Watson with fatal results.
29	Albert Gebop, .....	Pole, .....	Laborer, ...	42	M.	1	5	Archbald, .....	Lackawanna,	Struck by cars on inside gravity plane. The victim should have walked on the manway which is provided.
31	John Boyd, .....	Pole, .....	Miner, .....	35	M.	1	....	Von Storch slope, ....	Lackawanna,	Died June 3, from injuries received by falling roof, following a blast fired in face of chamber.
June	Bole Ginta, .....	French, ....	Miner, .....	62	M.	1	4	Hyle Park, .....	Lackawanna,	Died June 3, from injuries received in face of chamber.
11	Thomas Jolly, .....	English, ....	Miner, .....	47	M.	1	....	Old Forge Slope, .....	Lackawanna,	Died from injuries by fall of rock from a fall of roof at a point near face of chamber in the Clark vein.
July	David James, .....	American,	Driver, .....	16	S.	....	....	Taylor shaft, .....	Lackawanna,	Was endeavoring to arrest a car which had started away from the face of his chamber, when he sustained injuries, from which he died June 19.
17	Frank Basco, .....	Pole, .....	Driver, .....	17	S.	....	....	Bulls Head, .....	Lackawanna,	Died from injuries by cars inside, when the accident occurred. Died on July 3d.
22	John Sutula, .....	Pole, .....	Miner, .....	34	M.	1	....	Cayuga, .....	Lackawanna,	Was on a train of moving mine cars, inside, when he fell, receiving injuries.
24	Jacob Theobald, .....	German, ....	Laborer, ...	40	M.	1	2	Archbald, ....	Lackawanna,	Instantly killed by fall of roof in a cross cut in the Clark vein pitch workings.
Aug.	Joe Mattie, .....	Italian, ....	Laborer, ....	18	S.	....	....	William A, .....	Lackawanna,	Killed by fall of roof in a chamber in the Big vein. The victim had not obeyed the warning given him by the fire boss in the morning. Entered the face of the chamber against his miner's order. He was instantly killed by fall of rock.

4	James McLoughlin, .....	Irish, .....	Footman, ..	23	S.	.....	Oxford shaft, .....	Lackawanna,	Killed while trying to ascend the shaft on a rope.
12	Thomas Munay, .....	Irish, .....	Loader, .....	50	M.	1	William A breaker, ..	Lackawanna,	Killed by a railroad car. The car was being run according to Munay's order.
9	James McGowan, .....	Irish, .....	Miner, .....	46	M.	1	Mount Pleasant, .....	Lackawanna,	He mistook the report of a neighboring Miners blast for his own. He was on the way to his place when he was struck by flying coal.
13	Elias Birbeck, .....	American, ..	Door boy, ..	16	S.	.....	Von Storch slope, .....	Lackawanna,	Was killed by a passing car. A passenger train of loaded cars jumped the track, striking the one in which he was. He received fatal injuries.
22	Mike Obritas, .....	Pole, .....	Miner, .....	65	W.	1	Jermyn No. 2, .....	Lackawanna,	The victim was walking along the haulage road inside. He was overtaken by a train and killed.
10	Wm. Phillips, .....	Welsh, .....	Driver, .....	17	S.	.....	Tripp slope, .....	Lackawanna,	Crushed between a car and a pillar and was instantly killed. The latches at the branch had not been set properly.
20	Edward Jordan, .....	Irish, .....	Miner, .....	37	M.	1	Central, .....	Lackawanna,	Killed by fall of roof while resting a prop which had been dislodged by a blast.
12	Thomas Gray, .....	Irish, .....	Laborer, ..	47	M.	1	Bellevue shaft, .....	Lackawanna,	Fell under a railroad car in the Oxford section of the workings of the Big vein; he died Oct. 18th.
25	Jacob Lawn, .....	German, ....	Loader, ....	45	M.	1	Hampton breaker, ....	Lackawanna,	Running into the breaker, and instantly killed.
31	John Costello, .....	Irish, .....	Driver, .....	16	S.	.....	Pine Brook, .....	Lackawanna,	Instantly killed by a fall of roof in a gangway in No. 2, Dunmore vein.
6	Ignatz Oland, .....	Pole, .....	Laborer, ..	21	S.	.....	Greenwood No. 2 shaft	Lackawanna,	Killed by fall of roof while assisting his miner to restand a prop which had been dislodged by flying coal from a blast.
7	John Temko, .....	Hungarian, ..	Laborer, ..	29	M.	1	Archbald, .....	Lackawanna,	By falling roof. The miners were sounding it after a blast.
8	Anthony Barkowski, .....	Pole, .....	Laborer, ..	26	M.	1	Bellevue shaft, .....	Lackawanna,	Killed at face of gangway in New County vein by a 'saddle' falling on him.
11	Mike Hanahoe, .....	Irish, .....	Miner, .....	32	M.	1	Greenwood No. 12 drift	Lackawanna,	Dynamite which he was placing in a chamber exploded. He sustained injuries from which he died Nov. 13th in Lackawanna hospital.
14	Samuel Dingman, ....	German, ....	Fireman, ....	28	S.	.....	Oxford breaker, .....	Lackawanna,	Caught in conveyor line which supplies the fire room with fuel; died in the West Side Hospital.
14	Wm. Prolinsky, .....	Pole, .....	Miner, .....	35	M.	1	Manville, .....	Lackawanna,	Killed by explosion of gas in abandoned workings after passing over two danger signals.
19	Owen Gallagher, .....	Irish, .....	Miner, .....	29	M.	1	Von Storch slope, .....	Lackawanna,	Instantly killed by a fall of roof in a chamber in the rock vein within a few hours of the time he commenced to work in the place.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Dec.	2 William Kelly, .....	Irish, .....	Miner, .....	65	M.	1	.....	Dodge, .....	Lackawanna,	Fatally injured by fall of roof in a chamber in the rock vein. Props which had been dislodged by flying rock had not been restored.
7	Wm. McClosky, .....	Pole, .....	Miner, .....	30	M.	1	2	Pine Brook, .....	Lackawanna,	He had neglected to restand a number of brims which had been dislodged by a previous blast.
14	Richard Evans, .....	American, .....	Driver, .....	19	S.	.....	.....	Mount Pleasant, .....	Lackawanna,	Fatally injured by an explosion of gas in Dunmore No. 2 vein on an idle day; died on the following day.
14	John Zavaloski, .....	Pole, .....	Miner, .....	30	M.	1	1	Greenwood No. 2, ....	Lackawanna,	Injured while trying to steady a loaded car down a grade; died the following day in the Lackawanna Hospital.
16	Roderick Dunn, .....	Irish, .....	Loader, ....	20	S.	.....	.....	Bellevue breaker, ....	Lackawanna,	Instantly killed by railroad cars. He was uncoupling a car when the locomotive bumped up a train of empty cars.
18	I. I. Jones, .....	Welsh, .....	Co. man, ..	40	S.	.....	.....	National, .....	Lackawanna,	Fell in carriage while clearing ice. His head came in contact with the rail; died on the 20th of Dec.
20	Dan'l James, .....	Welsh, .....	Miner, .....	59	M.	1	.....	Continental, .....	Lackawanna,	Fatally injured by fall of roof; died the same day.
14	Henry Seperer, .....	Pole, .....	Loader, ....	36	S.	.....	.....	Taylor breaker, .....	Lackawanna,	Fatally injured by Railroad cars under the breaker. He died in Moses Taylor Hospital on the same day.
31	Frank Murphy, .....	Irish, .....	Driver, ....	20	S.	.....	.....	Pine Brook, .....	Lackawanna,	Was sitting on the bumper of the front car of a trip he was driving on to the head of Contract plane in Dunmore No. 2 vein. He leaned over in order to pass an empty car standing on the empty car track, and fell under the train and against the end of the same car. He died the same day in Lackawanna Hospital.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Second Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	Jos. Stankleivoy	Pole	Laborer	24	M.	Continental	Lackawanna	Slightly injured by fall of roof.
3	Daniel Evans	Welsh	Miner	33	M.	Continental	Lackawanna	Nose fractured by fall of roof.
3	Thos. W. Davies	Welsh	Miner	53	M.	Continental	Lackawanna	Right arm on dish, by a piece of rock, which he was pulling down.
4	Richard Gallagher	Irish	Driver	16	S.	Manville	Lackawanna	Leg injured by falling under mine car.
5	Edward Pidotzky	Pole	Driver	15	S.	Jermyn No. 1	Lackawanna	Face injured by being struck by hauling rope.
7	Michael Stauschefskie	Pole	Driver	36	M.	Sloan	Lackawanna	Jaw injured by a lever he was using to replace car on track.
8	Frank McGinty	American	Door boy	11	S.	Hyde Park	Lackawanna	Fell off a moving car and was injured.
10	William Thomas	Welsh	Miner	60	M.	Continental	Lackawanna	Slightly injured by falling in his working place.
12	John Snyder	German	Laborer	36	M.	Pine Brook	Lackawanna	Leg fractured by flying coal from roof.
12	Albert Haines	American	Door boy	15	S.	Continental	Lackawanna	Head injured between cage and side of shaft.
14	Edward Clack	Irish	Door boy	15	S.	Mount Pleasant	Lackawanna	Leg fractured between the bumper of cars.
17	Jno. Evans	American	Brakeman	20	S.	Taylor	Lackawanna	Foot injured by cars.
19	Ivory E. Richards	Welsh	Miner	36	M.	Mount Pleasant	Lackawanna	Struck by flying coal from blast.
22	Martin Ploalis	Pole	Laborer	30	S.	Mount Pleasant	Lackawanna	Arm fractured by fall of roof.
22	Geo. Bradburny	English	Laborer	53	S.	Sloan	Lackawanna	Injured by a fall of roof.
24	Geo. Vankoski	Pole	Laborer	21	S.	Capouse	Lackawanna	Painfully injured in shaft. He boarded the cage without permission.
25	Patrick Dunkin	Irish	Runner	17	S.	Sloan	Lackawanna	Arm fractured and leg severely injured by cars.
26	John Stavinsky	Pole	Laborer	42	S.	Jermyn No. 2	Lackawanna	These men were painfully injured by a "runaway" car on the culm plane outside. They had neglected to sprag the car.
26	Paul Honclack	Pole	Laborer	23	S.	Jermyn No. 2	Lackawanna	



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident In Brief.
Feb.	26 Chas. Haues, .....	German, .....	Driver, .....	18 S.		Sibley, .....	Lackawanna,	Leg fractured between an empty car and rib.
	27 Geo. Slinisky, .....	Russian, .....	Laborer, .....	30 S.		Tripp drift, .....	Lackawanna,	Back injured by fall of roof.
	28 Demetrius Leonard, ..	Italian, .....	Miner, .....	30 S.		Wm. A. .....	Lackawanna,	Leg fractured by a fall of coal.
	1 Martin Martin, .....	American, .....	Miner, .....	22 S.		Manville, .....	Lackawanna,	Struck by fall of roof.
	1 Amedeo Caplo, .....	Italian, .....	Laborer, .....	27 S.		Sibley, .....	Lackawanna,	Leg fractured and arm injured by fall of roof.
	2 David Griffiths, .....	American, .....	Driver, .....	17 S.		Taylor, .....	Lackawanna,	Injured while riding on haulage rope train.
	4 Alvo. Quick, .....	English, .....	Driver, .....	15 S.		Mount Pleasant, .....	Lackawanna,	Skull fractured, struck by a door which was forced open by an explosion of gas.
	4 John Black, .....	Lithuanian, .....	Laborer, .....	23 S.		Cayuga, .....	Lackawanna,	Black was severely and Haggerty
	4 John Haggerty, .....	American, .....	Runner, .....	22 S.		Cayuga, .....	Lackawanna,	Courses were slightly injured
	4 Michael Coursey, .....	American, .....	Driver, .....	18 S.		Cayuga, .....	Lackawanna,	ed by an explosion of gas.
	5 Jos. Gallagher, .....	American, .....	Driver, .....	16 S.		Tripp drift, .....	Lackawanna,	Hand cut and bruised by falling under car.
	5 Chas. Evans, .....	English, .....	Miner, .....	53 M.		Archbald, .....	Lackawanna,	Hip dislocated and head cut by fall of roof.
6	Owen Brink, .....	American, .....	Laborer, .....	23 S.		Dickson, .....	Lackawanna,	Struck by flying coal from a blast.
12	James Dempsey, .....	Irish, .....	Wheelman, .....	20 S.		Pennsylvania No. 5, .....	Lackawanna,	Arm fractured while assisting to replace a derailed car.
12	Richard Banks, .....	Scotch, .....	Driver, .....	18 S.		Manville, .....	Lackawanna,	Injured between car and door.
16	John McDermitt, .....	Irish, .....	Miner, .....	44 M.		Capouse, .....	Lackawanna,	Arm and leg fractured by fall of top coal.
16	John Pulkamskie, .....	Pole, .....	Laborer, .....	52 M.		Bellevue shaft, .....	Lackawanna,	Head and face cut by fall of rock.
18	John H. Jones, .....	American, .....	Miner, .....	32 M.		Continental, .....	Lackawanna,	Head dislocated by falling into the mine.
18	August Smith, .....	German, .....	Carpenter, .....	35 M.		Oxford breaker, .....	Lackawanna,	fine room outside adjusting a wheel. A pipe burst, and they
18	Ed. O'Nailey, .....	Irish, .....	Carpenter, .....	28 S.		Oxford breaker, .....	Lackawanna,	were scalded by escaping steam.
26	John Thomas, .....	Welsh, .....	Runner, .....	20 S.		Mount Pleasant, .....	Lackawanna,	Thumb lacerated while spragging a car.
26	Peter Savleskie, .....	Pole, .....	Miner, .....	39 S.		Mount Pleasant, .....	Lackawanna,	Burned while drying powder in his hat.
28	Torey P. Rich, .....	Italian, .....	Laborer, .....	25 S.		National washery, .....	Lackawanna,	Leg fractured by frozen culm falling from bank.

March	9	Elias J. Drake, .....	American, ....	Miner, .....	43	M.	Spring Brook, .....	Lackawanna, .....	Leg fractured by fall of roof in chamber.
	11	David Roberts, .....	American, ....	Driver, .....	16	S.	Tripp drift, .....	Lackawanna, .....	Finger cut off by cars.
	15	James Lloyd, .....	Welsh, .....	Door boy, .....	18	S.	Pyne, .....	Lackawanna, .....	Arm severely injured by falling under cars.
	21	Martin Kinlock, .....	Pole, .....	Laborer, .....	37	M.	Dodge, .....	Lackawanna, .....	Leg fractured by falling rock.
	19	Jos. Richards, .....	Welsh, .....	Door boy, .....	15	S.	Sloan, .....	Lackawanna, .....	Ankle dislocated while trying to board cars.
	27	Wm. Treaton, .....	English, .....	Laborer, .....	27	M.	Continental, .....	Lackawanna, .....	Leg fractured by fall of roof.
	26	Geo. Sheams, .....	American, .....	Laborer, .....	25	M.	Bellevue breaker, .....	Lackawanna, .....	Arm fractured by a car at the breaker.
	1	Harry Von Storch, .....	American, .....	Laborer, .....	19	S.	Dickson breaker, .....	Lackawanna, .....	Arm fractured by railroad cars.
	1	Patrick Higgins, .....	Irish, .....	Miner, .....	40	M.	Dodge, .....	Lackawanna, .....	Squeezed between mine car and rib.
	2	Frank Change, .....	Pole, .....	Laborer, .....	28	M.	Hampton, .....	Lackawanna, .....	Back and leg bruised by fall of roof.
April	3	Steve Longone, .....	Pole, .....	Laborer, .....	27	S.	Wm. A, .....	Lackawanna, .....	Back injured; fell 10 feet, from one end of the roof.
	3	Wm. Shepherd, .....	English, .....	Runner, .....	50	S.	Hyde Park, .....	Lackawanna, .....	Leg fractured by a car inside.
	3	Frank Galuniuski, .....	Pole, .....	Laborer, .....	20	W.	Bellevue shaft, .....	Lackawanna, .....	Leg fractured by a fall of coal.
	9	John Smith, .....	Pole, .....	Door boy, .....	16	S.	Dickson, .....	Lackawanna, .....	Arm fractured; struck by passing cars.
	10	Ronean Caetich, .....	Pole, .....	Wheelman, .....	20	S.	Greenwood No. 1, .....	Lackawanna, .....	Thumb cut off by cars inside.
	12	John Kleman, .....	German, .....	Miner, .....	61	M.	Mount Pleasant, .....	Lackawanna, .....	Leg fractured by falling under a car.
	15	Isaac Marshall, .....	Irish, .....	Loader, .....	53	M.	Oxford, .....	Lackawanna, .....	Rib fractured by falling against a car.
	16	Michael Linch, .....	Irish, .....	Miner, .....	45	M.	Mount Pleasant, .....	Lackawanna, .....	Head and body bruised by coal from blast.
	18	Thomas McDermott, ..	American, .....	Miner, .....	27	M.	Spring Brook, .....	Lackawanna, .....	Cuts and contusions by coal from blast.
	19	Stephen Howess, .....	Pole, .....	Slate picker, .....	12	S.	Jermyn No. 1, .....	Lackawanna, .....	Injured by falling into coal pockets while playing.
	20	Smith O'Shawski, .....	Pole, .....	Miner, .....	24	M.	Greenwood No. 2, .....	Lackawanna, .....	Both men were injured by explosion of powder. The result of insufficient care on the part of the miner.
	20	Joseph Greyeshi, .....	Pole, .....	Laborer, .....	27	M.	Greenwood No. 2, .....	Lackawanna, .....	Hip dislocated by fall of roof at face of chamber.
	23	Thos. Kelly, .....	American, .....	Miner, .....	24	S.	Spring Brook, .....	Lackawanna, .....	These men were riding on a train of cars inside. The train struck a safety block and the men were injured.
	23	John C. Jones, .....	American, .....	Driver boss, .....	29	M.	Hyde Park, .....	Lackawanna, .....	Slightly injured by a fall of top coal.
	26	Laughlin McHugh, .....	American, .....	Runner, .....	30	S.	Hyde Park, .....	Lackawanna, .....	Two ribs fractured by a fall of coal.
	26	James King, .....	Irish, .....	Laborer, .....	37	M.	Bellevue shaft, .....	Lackawanna, .....	
	29	John M. Thomas, .....	Welsh, .....	Miner, .....	45	M.	Archbald, .....	Lackawanna, .....	
	1	Wm. Dolphin, .....	Irish, .....	Miner, .....	38	M.	Bellevue shaft, .....	Lackawanna, .....	
	1	John Golden, .....	Irish, .....	Laborer, .....	28	M.	Bellevue shaft, .....	Lackawanna, .....	
	1	Benj. Waktus, .....	American, .....	Miner, .....	38	M.	Bellevue shaft, .....	Lackawanna, .....	
May	1	Thos. H. Jones, .....	Welsh, .....	Miner, .....	35	M.	Tripp slope (Dia.), .....	Lackawanna, .....	Slightly injured by an explosion of gas.
	2	John Golden, .....	Irish, .....	Miner, .....	44	M.	Green Ridge slope, .....	Lackawanna, .....	Knee fractured by fall of roof.
	2	John Nozhi, .....	Pole, .....	Miner, .....	44	M.	Bellevue slope, .....	Lackawanna, .....	Leg fractured by fall of roof.
	4	John Nozhi, .....	Pole, .....	Miner, .....	44	M.	Bellevue slope, .....	Lackawanna, .....	Slightly injured by fall of roof.
	4	Michael O'Holleran, .....	Irish, .....	Miner, .....	41	M.	Greenwood No. 2, .....	Lackawanna, .....	Slightly injured by fall of roof.
	7								
	7								

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
June	16 Janetz Wisniskie, .....	Pole, .....	Laborer, .....	29	S	Continental, .....	Lackawanna,	Leg fractured by fall of roof.
	20 Jas. Fawcette, .....	Pole, .....	Laborer, .....	43	S	Continental, Pleasant, .....	Lackawanna,	Injured by explosion of gas.
	24 Frank Wadsworth, .....	Irish, .....	Shift man, .....	43	M	Manville, .....	Lackawanna,	Injured by fall of roof.
	25 Jas. Shawlin, .....	Irish, .....	Miner, .....	29	M	Pine Brook, .....	Lackawanna,	Injured by coal from blast.
	27 Dominick Crane, .....	Irish, .....	Driver, .....	16	S	Meadow Brook, .....	Lackawanna,	Leg bruised between the bumpers of mine cars.
	29 Henry Jones, .....	Welsh, .....	Miner, .....	54	M	Belle-vue shaft, .....	Lackawanna,	Slightly injured by fall of coal.
	3 E. J. Hughes, .....	American, .....	Mine foreman, .....	45	M	Spencer, .....	Lackawanna,	(Slightly injured by explosion of gas.
	3 James Tughe, .....	American, .....	Company man, .....	35	M	Spencer, .....	Lackawanna,	Leg fractured by fall of roof.
	4 John King, .....	American, .....	Miner, .....	29	M	Nay Aug slope, .....	Lackawanna,	Severely injured by a premature blast.
	7 Lewis Perry, .....	Welsh, .....	Miner, .....	52	M	Belle-vue shaft, .....	Lackawanna,	Injured by cars.
July	7 Frank Pollard, .....	English, .....	Laborer, .....	29	M	Belle-vue shaft, .....	Lackawanna,	Breast and shoulder injured by fall of roof.
	10 Wm. Threlwell, .....	American, .....	Driver, .....	15	S	Continental, .....	Lackawanna,	of roof.
	11 Jos. Skiggowitz, .....	Pole, .....	Laborer, .....	42	M	Dickson, .....	Lackawanna,	Slightly injured by cars.
	24 Thos. Gallagher, .....	Irish, .....	Dump man, .....	55	S	Sloan breaker, .....	Lackawanna,	Back and head injured by fall of roof.
	9 John Edwards, .....	Welsh, .....	Miner, .....	35	S	Continental, .....	Lackawanna,	Leg fractured by a haulage rope breaking.
Aug.	15 Thomas S. Lewis, .....	Welsh, .....	Mine foreman, .....	43	M	Jermyn No. 1, .....	Lackawanna,	Slightly injured by a fall of coal.
	15 Philip English, .....	Italian, .....	Miner, .....	36	M	Nay Aug slope, .....	Lackawanna,	Collar bone fractured; squeezed between car and mule.
	18 Edward Griffiths, .....	Welsh, .....	Driver, .....	17	S	Central, .....	Lackawanna,	Head and body injured by coal from blast.
	20 Wm. Green, .....	Welsh, .....	Miner, .....	35	M	Mount Pleasant, .....	Lackawanna,	Slightly injured by fall of roof.
	22 Louis Constant, .....	Pole, .....	Laborer, .....	22	S	Cayuga, .....	Lackawanna,	Injured by coal from blast.
Aug.	26 Towell Mizell, .....	Pole, .....	Miner, .....	26	M	West Ridge slope, .....	Lackawanna,	Two ribs fractured by fall of rock.
	28 Richard Kelly, .....	Irish, .....	Miner, .....	41	M	Central, Pleasant, .....	Lackawanna,	Leg fractured by coal from blast.
	29 Richard Grady, .....	Irish, .....	Miner, .....	48	M	Mount Pleasant, .....	Lackawanna,	Leg fractured by coal from blast.
	30 Wm. Green, .....	American, .....	Driver, .....	41	M	Mount Pleasant, .....	Lackawanna,	Leg fractured by coal from blast.
	1 James Parkley, .....	Irish, .....	Driver, .....	18	S	Taylor shaft, .....	Lackawanna,	Foot injured by a derailed car.
	2 John Heist, .....	German, .....	Slate boss, .....	69	M	Spring Brook breaker, .....	Lackawanna,	Shoulder dislocated by falling on chute in breaker.
	3 Harry Lisk, .....	American, .....	Door boy, .....	15	S	Diamond, .....	Lackawanna,	Two ribs fractured by falling under car.

5	Mike Posey, .....	Hungarian, .....	Laborer, .....	24	S. ....	Taylor shaft, .....	Lackawanna, .....	Leg fractured by fall of roof.
5	Stephen Naflet, .....	Pole, .....	Miner, .....	43	M. ....	Dickson, .....	Lackawanna, .....	Injured by exploding gas.
6	Alex. Mancka, .....	Pole, .....	Laborer, .....	35	M. ....	Dickson, .....	Lackawanna, .....	Ankle bruised by coal rolling from chute.
6	Henry Smith, .....	Welsh, .....	Laborer, .....	19	S. ....	Continental, .....	Lackawanna, .....	Thigh fractured by pumping machinery.
15	Rice Prosser, .....	Welsh, .....	Engineer, .....	47	M. ....	Dodge, .....	Lackawanna, .....	Slightly injured by fall of roof.
17	Carl Burth, .....	Italian, .....	Miner, .....	22	S. ....	Old Forge No. 1, .....	Lackawanna, .....	Arm dislocated by cars.
17	Patrick Reap, .....	American, .....	Footman, .....	22	S. ....	Old Forge No. 1, .....	Lackawanna, .....	Leg fractured by fall of roof.
19	John Connes, .....	Irish, .....	Miner, .....	40	M. ....	Bellevue shaft, .....	Lackawanna, .....	Leg fractured by fall of roof.
22	Patrick McGrath, .....	Irish, .....	Laborer, .....	46	M. ....	Pennsylvania No. 5, .....	Lackawanna, .....	Slightly injured by fall of roof.
22	David Gould, .....	Welsh, .....	Miner, .....	49	M. ....	Archbald, .....	Lackawanna, .....	Shin wound in leg of first cars.
23	Jonathan Davies, .....	American, .....	Door boy, .....	15	S. ....	Central, .....	Lackawanna, .....	Leg cut off in a collision of mine cars.
24	John Ploper, .....	American, .....	Mechanic, .....	25	M. ....	Archbald, .....	Lackawanna, .....	Ribs fractured and knee injured by fall of roof.
26	Matthew Knight, .....	Irish, .....	Miner, .....	36	M. ....	Hyde Park, .....	Lackawanna, .....	Injured by fall of roof.
27	Wm. Edwards, .....	Welsh, .....	Laborer, .....	41	M. ....	Oxford, .....	Lackawanna, .....	Slightly cut on head by fall of rock.
27	Frank Bostick, .....	Pole, .....	Laborer, .....	30	M. ....	Archbald, .....	Lackawanna, .....	Shoulder dislocated by a fall.
14	Fred. Liency, .....	English, .....	Carpenter, .....	50	M. ....	Dodge breaker, .....	Lackawanna, .....	Both men were burned, the result of handling powder in a careless manner.
16	Michael Rooney, .....	Irish, .....	Miner, .....	35	M. ....	Pine Brook, .....	Lackawanna, .....	Foot fractured by cars.
16	Thos. Tolboy, .....	Irish, .....	Laborer, .....	42	M. ....	Pine Brook, .....	Lackawanna, .....	Hand injured by cars.
18	Fred. Batz, .....	German, .....	Footman, .....	36	M. ....	Shant Pleasant, .....	Lackawanna, .....	Back injured by fall of roof.
20	Andrew Haskett, .....	Pole, .....	Driver, .....	18	S. ....	Mount Pleasant, .....	Lackawanna, .....	Hands and face burned by handling powder in a careless manner.
21	Michael Sopp, .....	Slav, .....	Miner, .....	27	M. ....	Jermyn No. 2, .....	Lackawanna, .....	Leg fractured by fall of roof.
23	Wm. Beckman, .....	German, .....	Miner, .....	27	M. ....	Pennsylvania No. 5, .....	Lackawanna, .....	Leg severely injured by a car.
25	Martin Sacol, .....	Pole, .....	Miner, .....	46	S. ....	Old Forge No. 2, .....	Lackawanna, .....	Painfully injured between car and rib.
27	Carl Gottle, .....	Slav, .....	Driver, .....	14	S. ....	Wm. A., .....	Lackawanna, .....	Back bruised by fall of bony coal.
27	John Morgan, .....	Welsh, .....	Wheel man, .....	39	M. ....	Pine Brook, .....	Lackawanna, .....	Foot cut off in breaker machinery.
30	Thos. Berge, .....	English, .....	Miner, .....	38	M. ....	Continental, .....	Lackawanna, .....	Foot injured by stepping on a rail.
2	Michael Miller, .....	Slav, .....	State picker, .....	40	M. ....	Dickson breaker, .....	Lackawanna, .....	Ankle dislocated by fall of roof.
3	John Mack, .....	American, .....	Picker, .....	36	M. ....	Payuga breaker, .....	Lackawanna, .....	Back fractured and fractured ribs.
4	Michael Cannon, .....	Irish, .....	Miner, .....	33	M. ....	Lawrence breaker, .....	Lackawanna, .....	Struck by fall of roof.
5	C. D. Belles, .....	American, .....	Carpenter, .....	33	S. ....	Oxford, .....	Lackawanna, .....	Leg fractured by fall of roof.
12	Thomas James, .....	Welsh, .....	Foot man, .....	25	S. ....	Continental, .....	Lackawanna, .....	Bruised in a collision on inside plane.
16	John Rohan, .....	Pole, .....	Laborer, .....	34	M. ....	Continental, .....	Lackawanna, .....	Hip dislocated while replacing car on track.
16	John Pany, .....	English, .....	Track layer, .....	48	M. ....	Continental, .....	Lackawanna, .....	Both legs fractured by conveyer line.
17	Stanley Frickoekl, .....	Pole, .....	Laborer, .....	33	S. ....	Continental, .....	Lackawanna, .....	Injured; a drill fell on his foot.
19	Andrew Brown, .....	American, .....	Picker tender, .....	13	S. ....	Brislin breaker, .....	Lackawanna, .....	Leg fractured by haulage rope.
19	Josef Rowanokkie, .....	Pole, .....	Laborer, .....	32	S. ....	Central, .....	Lackawanna, .....	Back painfully injured by fall of roof.
21	Wm. C. Powell, .....	Welsh, .....	Fire boss, .....	38	M. ....	Tripp shaft, .....	Lackawanna, .....	Cut on wrist by fall of rock.
21	Richard Conolly, .....	American, .....	Laborer, .....	20	S. ....	Taylor shaft, .....	Lackawanna, .....	Head and face burned by powder.
21	Stephen Evers, .....	American, .....	Miner, .....	27	M. ....	Continental, .....	Lackawanna, .....	Injured by a fall of roof.
21	Edward Walsh, .....	Irish, .....	Driver, .....	16	S. ....	Mount Pleasant, .....	Lackawanna, .....	
25	James Jones, .....	Welsh, .....	Miner, .....	38	M. ....	Central, .....	Lackawanna, .....	
28	Stanley Pricket, .....	Pole, .....	Laborer, .....	17	S. ....	Archbald, .....	Lackawanna, .....	

Sept.

Oct.



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
25	Thos. Roberts, .....	Welsh, .....	Miner, .....	27	S.	Continental, .....	Lackawanna,	Three ribs fractured by a fall of roof.
31	Enilio Gentile, .....	Italian, .....	Laborer, .....	24	S.	Sibley, .....	Lackawanna,	Leg fractured by a fall of roof.
31	Edward Ford, .....	Irish, .....	Driver, .....	24	S.	Oxford shaft, .....	Lackawanna,	Struck by iron rail while taking it off a carriage.
Nov. 2	Robert H. Nicholson, ..	American, .....	Oiler, .....	30	S.	Capouse, .....	Lackawanna,	Nose fractured by a kick from a horse.
11	Valentine O'Malia, ....	Irish, .....	Laborer, .....	35	S.	Greenwood No. 12 drift, ..	Lackawanna,	Hand cut off and otherwise injured by explosion of dynamite.
11	Patrick Hughes, .....	Irish, .....	Driver, .....	15	S.	Greenwood No. 1 breaker, ..	Lackawanna,	Arm cut off by falling under a car.
12	John C. O'Brien, .....	Irish, .....	Miner, .....	48	S.	Hyde Park, .....	Lackawanna,	Slightly injured by fall of roof.
13	Domitiek O'Ponick, .....	Pole, .....	Laborer, .....	20	M.	Greenwood No. 1, .....	Lackawanna,	Leg fractured by cars.
15	Henry Burgess, .....	English, .....	Miner, .....	20	M.	Capouse, .....	Lackawanna,	Slightly injured by fall of roof.
15	Anthony Hendler, .....	English, .....	Laborer, .....	24	S.	Capouse, .....	Lackawanna,	Slightly injured by a fall of roof.
19	Thomas Davies, .....	American, .....	Miner, .....	23	S.	Mount Pleasant, .....	Lackawanna,	Leg fractured by an explosion of gas.
19	Reese Thomas, .....	Welsh, .....	Miner, .....	42	S.	Mount Pleasant, .....	Lackawanna,	Slightly injured by an explosion of gas.
20	David Williams, .....	American, .....	Driver, .....	21	S.	Bellevue slope, .....	Lackawanna,	Skull fractured and shoulder dislocated; struck by a pole.
22	Chas. Olshock, .....	Pole, .....	Laborer, .....	36	M.	Capouse, .....	Lackawanna,	Injured by fall of roof.
21	Andrew Gawassy, .....	Pole, .....	Laborer, .....	23	S.	Continental, .....	Lackawanna,	Leg fractured by fall of roof.
25	Alex. Long, .....	Italian, .....	Slate picker, .....	56	M.	Peasant washery, .....	Lackawanna,	Leg fractured by breaker machinery.
25	Geo. Winkie, .....	American, .....	Driver, .....	13	M.	Pike Park, .....	Lackawanna,	Leg fractured by falling under car.
26	James Lancaster, .....	English, .....	Miner, .....	40	M.	West Ridge slope, .....	Lackawanna,	Burned by the careless use of powder.
26	John Hayes, .....	American, .....	Miner, .....	23	M.	Continental, .....	Lackawanna,	Severely bruised by fall of roof.
26	Stephen Erush, .....	German, .....	Driver, .....	18	S.	Old Forge No. 1, .....	Lackawanna,	Leg fractured by cars inside.
26	Andrew Standurozkie, ..	Pole, .....	Miner, .....	35	M.	Bellevue slope, .....	Lackawanna,	Back, hip and thigh injured by fall of roof.
30	Michael Costello, .....	Irish, .....	Miner, .....	25	S.	Capouse, .....	Lackawanna,	Leg fractured by fall of roof at face of chamber.
Dec. 1	Chas. Young, .....	American, .....	Driver, .....	40	M.	Pyne, .....	Lackawanna,	Arm fractured by cars inside.
2	Pat McNally, .....	Irish, .....	Miner, .....	27	M.	Greenwood No. 1, .....	Lackawanna,	McNally was injured internally and Kosomcavich's thigh was fractured by fall of roof.
2	Domitiek Kosomcavich, ..	Pole, .....	Laborer, .....	34	M.	Greenwood No. 1, .....	Lackawanna,	

2	Dan' J. Hill, .....	American, .....	Carpenter, .....	36	M.	Holden breaker, .....	Lackawanna,	Fell from the breaker and severely bruised.
3	John Elert, .....	American, .....	Driver, .....	18	S.	Taylor shaft, .....	Lackawanna,	Both legs fractured in a collision of cars.
6	Alex. Boken, .....	Pole, .....	Miner, .....	28	S.	Brisbin, .....	Lackawanna,	Slightly injured by fall of roof.
6	Nick Sossow, .....	American, .....	Runner, .....	13	S.	William A. ....	Lackawanna,	Slightly injured by cars.
6	Patk. McPeake, Jr., ....	American, .....	Miner, .....	23	S.	Old Forge No. 2, .....	Lackawanna,	Back and shoulder injured by fall of roof.
9	Alex. Gussell, .....	Pole, .....	Driver, .....	17	S.	Sloan, .....	Lackawanna,	Leg fractured and collar bone in- jured by cars.
10	Geo. Dooney, .....	German, .....	Miner, .....	45	M.	Pyne, .....	Lackawanna,	Leg fractured by a fall of roof.
11	John Coshken, .....	Lithuanian, ...	Laborer, .....	26	S.	Dickson, .....	Lackawanna,	Back painfully injured by fall of roof.
11	John Williams, .....	Pole, .....	Miner, .....	48	M.	Mount Pleasant, .....	Lackawanna,	Slightly burned on hands and face by gas.
34	Martin Melvin, .....	American, .....	Slate picker, ....	14	S.	Gibbons breaker, .....	Lackawanna,	Severely injured in revolving screen.
26	George Kohler, .....	German, .....	Driver, .....	16	S.	Archbald, .....	Lackawanna,	Leg fractured by cars.
28	Michael Wulder, .....	Greek, .....	Ashman, .....	40	M.	Bellevue breaker, .....	Lackawanna,	Scalded by escaping steam from a broken boiler.
28	Thomas James, .....	American, .....	Driver, .....	20	S.	Hampton, .....	Lackawanna,	Head and back injured by fall of roof.
28	Thomas Richard, .....	Welsh, .....	Miner, .....	64	M.	Hampton, .....	Lackawanna,	Foot injured by fall of rock.
28	Martin McNamara, .....	American, .....	Company man, ....	24	S.	Von Storch slope, .....	Lackawanna,	Head hit by mine car.
30	Tim Rafferty, .....	Irish, .....	Runner, .....	24	S.	Sibley, .....	Lackawanna,	Leg fractured by being squeezed between car and mule.



# Third Anthracite District.

LUZERNE AND SULLIVAN COUNTIES.

Pittston, February 24, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of herewith submitting my annual report as Inspector of Coal Mines for the Third Anthracite District for the year 1901. It contains the usual tabular statements of mine accidents, the number of each class of employes, quantity of coal produced and other useful memoranda.

There were 6,925,598 tons of coal produced, being 628,667 tons more than the production of the preceding year.

Eighty-four fatal accidents occurred, which is twenty-five more than for 1900.

The number of non-fatal accidents was 173, being an increase of thirty-four over the year 1900.

Forty-two wives were made widows and eighty-nine children under fourteen years of age were left fatherless.

The average number of days worked was 173.25. The production per day was 40,500 tons; 82,399 tons were produced per life lost, and 40,032 tons for each non-fatal accidents.

Very respectfully,

H. McDONALD,  
Inspector of Mines.

## Total Production of Coal in Tons During the Year 1901.

Pennsylvania Coal Company, .....	1,674,490.05
Lehigh Valley Coal Company, .....	1,420,477.19
Hillside Coal and Iron Company, .....	443,939.11
Delaware, Lackawanna and Western Railroad Com- pany, .....	408,090.02
Temple Iron Company, .....	622,561.10
Delaware and Hudson Company, .....	285,151.15
Seneca Coal Company, .....	307,575.06
John C. Haddock, .....	112,398.02



Clear Spring Coal Company, .....	261,897.01
Florence Coal Company, Limited, .....	11,433.08
W. G. Payne & Co., .....	162,788.02
Traders' Coal Company, .....	91,208.06
Avoca Coal Company, .....	86,972.14
Robertson and Law, .....	78,712.00
Raub Coal Company, .....	108,427.14
Algonquin Coal Company, .....	275,590.02
Laurel Run Coal Company, .....	77,893.03
Stevens Coal Company, .....	169,819.06
Gardner Creek Coal Company, .....	18,130.11
Wyoming Coal and Land Company, .....	108,621.03
State Line and Sullivan Railroad Company, .....	65,353.15
W. B. Gunton, .....	70,812.10
Wm. Richmond, .....	16,636.06
Hicks River Coal Company, .....	5,148.00
Warnke Coal Company, .....	26,549.04
North American Coal Company, .....	4,965.00
Crescent Coal Company, .....	9,955.12
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Total, .....	6,925,598.08
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The Total Production was Made up as Follows.

Shipped to market by railroad, .....	6,315,420.15
Sold at mines for local use, .....	137,965.13
Consumed to generate steam at mines, .....	472,212.00
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Total, .....	6,925,598.08
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TABLE A—Showing the Number of Lives Lost, Tons of Coal Produced per Life Lost and per Person Injured, Number of Employes and Number of Employes per Life Lost and per Person Injured in the Year 1901.

Names of Operators.	Number of lives lost.	Tons of coal produced per life lost.	Number of persons severely injured.	Tons of coal produced per person severely injured.	Number of persons employed.	Number of employes per life lost.	Number of employes per person severely injured.
Pennsylvania Coal Co., .....	16	104,655	33	50,742	4,276	267	129
Lehigh Valley Coal Co., .....	18	78,915	36	39,457	2,756	153	76
Hillside Coal and Iron Co., .....	5	88,787	10	44,393	1,459	289	149
Delaware, Lack'a and West. R. R. Co., ..	2	204,045	14	29,149	1,066	503	71
Temple Iron Co., .....	9	69,173	19	32,766	1,366	140	71
Delaware and Hudson Co., .....	5	81,618	12	34,007	1,038	207	86
Seneca Coal Co., .....	4	76,893	.....	.....	767	191	.....
John C. Haddock, .....	1	112,398	4	28,099	301	301	75
Clear Spring Coal Co., .....	3	87,299	1	261,897	658	219	261,897
Florence Coal Co., Limited, .....	.....	.....	1	11,433	.....	.....	11,433
W. G. Payne & Co., .....	1	162,788	8	20,348	481	481	60
Traders' Coal Co., .....	5	18,241	3	30,420	330	66	110
Avoca Coal Co., .....	1	86,972	2	43,486	367	367	183
Robertson & Law, .....	.....	.....	1	78,712	194	.....	191
Raub Coal Co., Limited, .....	1	108,427	4	27,106	360	360	90
Algonquin Coal Co., .....	3	91,896	5	55,138	674	224	134
Laurel Run Coal Co., .....	.....	15,578	3	25,964	354	70	118
Stevens Coal Co., .....	2	84,909	14	12,129	393	196	28
North American Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Wyoming Coal and Land Co., .....	3	36,207	1	108,621	212	70	212
State Line and Sullivan Railroad Co., ..	.....	.....	1	65,353	233	.....	233
W. B. Gunton, .....	.....	.....	.....	.....	201	.....	.....
Wm. Richmond, .....	.....	.....	.....	.....	104	.....	.....
Hicks River Coal Co., .....	.....	.....	1	5,148	37	.....	37
Warnke Coal Co., .....	.....	.....	.....	.....	25	.....	.....
Gardner Creek Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Crescent Coal Co., .....	.....	.....	.....	.....	22	.....	.....
Total, .....	84	82,399	173	40,032	17,654	210	102

TABLE B—Classification of fatal accidents for the year.

	Causes of Fatal Accidents.								Occupation of Person Killed or Fatally Injured.								Nationality of Persons Killed or Fatally Injured.														
	Smoothered by gases.	By explosion of gas.	By falling down shafts.	By falls of roof and coal.	By mine cars underground.	By explosions of powder and blasts.	By miscellaneous causes inside.	By miscellaneous causes on surface.	Total.	Mine foreman and fire bosses.	Miners.	Laborers.	Runners.	Driver boss and drivers.	Door tenders.	Head and foot man.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	Americans.	English.	Welsh.	Scotch.	Irish.	Poles.	Slav.	Germans.	Austrians.	Italians.	Lithuanians.	Total.
January	3			5	2	1	1	1	11	3	4	2		1	1				11	1		2	3	2		2			1		11
February				1	1	1	1	1	5			3							5	1		1	1		1			1			5
March				1	1	1	1	1	6			3							10	1		1						1			10
April		1	1	1	1	1	1	2	10			1		1	1				10	2		1									10
May				1	1	1	1	1	5			1							10	2		1									10
June				1	1	1	1	1	5			1							10	2		1									10
July				1	1	1	1	1	5			1							10	2		1									10
August			3	1	1	1	1	2	10			1		1	1				10	2		1		2		1					10
September		1	1	1	1	1	1	1	6			1		1	1				10	2		1		1		1					10
October		1	1	1	1	1	1	1	6			1		1	1				10	2		1		1		1					10
November				1	1	1	1	1	5			1		1	1				10	2		1		1		1					10
December				1	1	1	1	1	5			1		1	1				10	2		1		1		1					10
Total	3	6	4	29	8	10	4	10	84	3	27	29	3	7	1	1	3	10	84	18	1	4	1	11	31	6	1	2	1	2	84

Widows, 42; orphans, 59.

TABLE C—Classification of non-fatal accidents for the year.

Causes of Non-Fatal Accidents.				Occupation of Persons Severely Injured.												Nationality of Persons Severely Injured.																					
				Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	Mine foreman and fire bosses.	Timber and brattice men.	Miners.	Laborers.	Head and foot men.	Company men.	Track layers.	Runners.	Drivers.	Door boys.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	Americans.	Welsh.	Irish.	English.	Scotch.	Poles.	Slavs.	Germans.	Austrians.	Italians.	Hungarians.	Lithuanians.	Russians.	Total.
January.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	13	1	1	9	3	4	1	1	1	1	1	1	1	1	13	1	1	3	2	1	1	1	1	1	1	1	1	2	2	13
February.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	14	1	1	10	3	4	1	1	1	1	1	1	1	1	14	4	4	1	1	1	1	1	1	1	1	1	1	1	14	
March.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	14	1	1	10	3	4	1	1	1	1	1	1	1	1	14	6	6	1	1	1	1	1	1	1	1	1	1	1	14	
April.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	14	1	1	10	3	4	1	1	1	1	1	1	1	1	14	6	6	1	1	1	1	1	1	1	1	1	1	1	14	
May.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	14	1	1	10	3	4	1	1	1	1	1	1	1	1	14	6	6	1	1	1	1	1	1	1	1	1	1	1	14	
June.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	8	1	2	3	3	1	1	1	1	1	1	1	1	8	3	3	1	1	1	1	1	1	1	1	1	1	1	1	8	
July.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	21	1	1	19	3	4	1	1	1	1	1	1	1	21	10	10	1	1	1	1	1	1	1	1	1	1	1	1	21	
August.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	12	1	1	10	3	4	1	1	1	1	1	1	1	12	6	6	1	1	1	1	1	1	1	1	1	1	1	1	12	
September.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	16	1	1	14	3	4	1	1	1	1	1	1	1	16	6	6	1	1	1	1	1	1	1	1	1	1	1	1	16	
October.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	23	1	1	21	3	4	1	1	1	1	1	1	2	23	4	4	3	2	1	1	1	1	1	1	1	1	1	1	23	
November.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	14	1	1	12	3	4	1	1	1	1	1	1	1	14	4	4	3	2	1	1	1	1	1	1	1	1	1	1	14	
December.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	14	1	1	12	3	4	1	1	1	1	1	1	1	14	4	4	3	2	1	1	1	1	1	1	1	1	1	1	14	
Total.	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	173	3	1	68	37	4	2	1	10	28	7	1	11	173	47	11	22	9	2	31	23	5	2	4	4	1	3	473		



TABLE D.—Showing the method and state of ventilation in all the collieries operated in the Third Anthracite District for the year ending December 31, 1901.

	Number of fans.	Diameter of fans—feet.	Revolutions per minute.	Water gauge reading at or near fan—inches.	Number of air currents or splits.	Persons employed in the mines.	Cubic feet of air at the inlet.	Cubic feet of air at the face of workings.	Cubic feet of air at the outlet.
Barnum No. 1.	1	21	64	1	4	79	41,700	43,500	46,900
Barnum No. 2.	1	17	62	1	4	118	80,000	60,500	90,000
Barnum No. 3.	1	17	76	1	4	217	71,900	70,400	73,600
No. 13 shaft.	1	20	50	6-10	3	174	75,800	63,600	89,000
Lewis shaft.	1	20	63	1	4	160	95,000	70,000	100,000
No. 2 shaft.	1	20	50	8-10	4	141	78,800	69,430	81,000
No. 3 shaft.	1	20	66	9-11	3	138	84,000	72,450	87,000
No. 4 shaft.	1	20	71	9-11	1	186	94,300	76,750	106,600
No. 5 shaft.	1	20	65	6-10	7	171	92,100	82,400	102,400
No. 6 shaft.	1	20	65	5-10	7	168	80,600	64,000	87,900
No. 11 shaft.	2	20	58	1	6	206	108,860	93,610	115,230
No. 9 shaft.	1	20	63	1	5	180	92,420	77,975	98,115
No. 12 and 10 Jr. shaft.	1	20	65	1	4	190	64,300	52,300	68,900
No. 7 shaft.	1	20	60	1	4	176	74,570	61,960	81,730
Hayte shaft.	1	20	72	1-1-10	8	244	148,140	133,310	160,820
No. 14 shaft.	1	20	65	1-5-10	3				
No. 14 tunnel.	1	17	50	8-10	5				
Prospect shaft.	2	30	52	2	10	322	107,200	85,400	191,400
Milwaukee shaft.	1	30	61	1-5-10	6	120	74,300	57,900	80,000
Oakwood shaft.	1	30	57	2-1-10	9	120	50,980	37,285	53,967
Hillman slope.	2	15	80	9-10	3	121	77,706	47,120	91,335
Wyoming shaft.	1	25	45	8-10	6	119	108,720	90,280	119,950
Henry shaft.	1	30	42	1-2-10	9	245	124,401	83,464	126,212
Mattly shaft.	1	25	75	2-5-10	3				
Matthys slope.	1	12	75	1	2				
Exeter No. 1 shaft.	2	20	60	7-10	5	161	146,570	88,200	171,200
Exeter No. 2 shaft.	2	20	60	1-3-10	3	161	74,314	48,256	98,576

[illegible]

*Thymus* = *Thymus*

middle; on strike,

Ventilation not put in order as yet.

### Delaware Mine Fire.

The fire which took place in the Cooper or Top split of the Baltimore vein Delaware shaft located at Hudson, December 13, 1900, mention of which was made in my last report, was successfully extinguished as far as any indications can be discovered by daily examinations of the surrounding territory, by flushing the mine with culm, and the colliery resumed operations in the later part of June, 1902, after being idle for six months. Too much credit cannot be given to those who had charge of the undertaking, and likewise to all the workmen for their persistency in overcoming all the obstacles which were many, as the main roof was crushing and the pillars giving way on the main road to the shaft, and while there was another way for escape, it was such an inconvenient way to bring in supplies, that the main gangway was timbered for a half mile by which they succeeded in holding the gangway open. While this state of affairs prevailed the air current to some extent was destroyed, and the surrounding old workings became filled with the damp from the fire, and between the Laurel Run slope workings east of the fire, a large body of explosive gas had accumulated in the old workings, causing grave apprehension in the minds of all, of the roof caving and forcing the body of explosive gas back on the fire and causing an explosion, therefore on December 29, 1900, I sent the following notice to David J. Williams, inside foreman of Laurel Run colliery.

Pittston, Pa., December 29, 1900.

Mr. David J. Williams, Mine Foreman, Laurel Run Colliery, Parsons, Pa.:

Dear Sir: Please keep all the workmen of Laurel Run colliery out of the mines, as I understand that explosive gas has accumulated to an alarming extent between the inside workings of your mine and the fire in the Delaware workings, until you hear from me.

I am truly yours,

H. McDONALD,  
Inspector of Mines.

I would here state that I was at the Delaware colliery on the 29th of December, 1900, and ordered the men out by telephone at 9 A. M., which order was immediately complied with, and when I went to my office, I sent the above notice which I understand Mr. Williams showed to some of the officials, who advised him to keep out of the mine.

While Laurel Run mine was shut down and the men who were fighting the fire had been driven back on account of lack of pure air, a consultation was held and it was decided to close the intake of the Laurel Run mine and connect both ventilating fans on the Delaware workings, as by stopping the Delaware fan they found that the workmen could approach the fire and proceed again with the work of cutting around it.

On the morning of January 3, 1901, David J. Williams, mine boss and William Morgan, Martin Fortune and Wm. Earley, fire bosses of Laurel Run colliery went into the mine about 9 A. M., in company with a rock contractor, by the manway and descended to the Checker vein inside slope to locate a rock shaft which is as I understand to be sunk to Red Ash vein. After the contractor went out the above four men went down to the third lift to make an examination, and proceeded through some of the workings which were the returns from the fire, and when they found that they were so badly affected by damp they turned to go back and had reached the slope when they all fell, with the exception of Williams who started up the slope for help but failed to reach the top. Towards evening the outside foreman, Seaman Stucker became alarmed and sent for some of the workmen to look for them. When they were found about 9 P. M., Williams and Morgan were dead, Fortune and Earley after considerable exertion by the doctors were restored to consciousness in a few hours. Fortune died on the 10th of January, from the effects, but Earley fully recovered. What induced Mr. Williams to go into the mine after having been ordered to keep out is hard to say, as he was naturally bright and had filled the position of mine foreman for years before for other companies.

#### Burning of No. 14 Breaker.

On February 18, 1901, the large No. 14 Breaker of the Pennsylvania Coal Company located in Jenkins township, caught fire and was burned to the ground, and the employes were idle for some time until room in the other collieries of the company could be made for them. A new breaker has been built and the machinery is now being installed, with expectation of commencing to prepare coal by April 1, of this year. The breaker has a capacity of 3,000 tons per day and will have all the latest improved machinery. A new washery has been built in connection with the breaker to prepare all the refuse from it.

In January, 1901, the large "Babylon breaker" and washery of the Temple Iron Company were destroyed by fire. How it originated remains a mystery; the colliery has been idle since, the company having declined to rebuild. All the coal will be taken to the Lawrence breaker for preparation for market as soon as roads are built.

#### Improvements by the Lehigh Valley Coal Company During the Year 1901.

Prospect Colliery...The Prospect shaft was completed to the Red Ash vein and the hosting engines have been equipped with spools



for winding flat ropes five-eight inches thick by six inches wide. These ropes are now in service and giving great satisfaction.

A rock tunnel was driven from the Baltimore vein to the Five foot, a distance of 488 feet. The vein was found in good condition and about five feet thick. The second opening for this tunnel is a rock plane on a pitch of thirty degrees. The total length of which is 199 feet. At the end of the year a connection was made in the coal from the plane to the tunnel.

In the above colliery a tunnel has been driven through the fault at the fourth lift of the Midvale Hillman slope which enables the company to concentrate all the transportation from the lower levels of the Midvale slope at one point.

At the Prospect Hillman slope a fire was discovered in the airway of the proving slope Hillman vein, on the 12th of April, which was caused by a gas feeder becoming ignited from a Bratticeman's lamp. The fire was fought for some hours but it was found that gas was accumulating inside of the location of the fire. It was therefore decided to fill the slope with water which was promptly done and the fire was extinguished.

During the year it was decided by the Lehigh Valley Coal Company to reopen the Mineral Spring Colliery which has been shut down since 1889, and work was commenced sinking two shafts to the Red Ash vein. The old Baltimore slope has been reopened to the third lift and preparations are being made for sinking a slope in the Checker vein to open up the coal to the north. A ventilating fan has been erected which will ventilate this slope.

The Coal Brook slope which has been idle since 1889, is being put in condition. The water has been pumped out and the gangways are being put in order for mining coal. The foundation for a new breaker has been constructed and the foundation for a 1,000 horse power boiler plant of the Babcock and Wilcox type, has been completed.

The Henry breaker has been converted into a washery and is now being operated as such. Two shafts have been commenced from the surface to reach the Red Ash vein, which are being sunk through a large pillar left in the Baltimore vein for that purpose. The idea being that all veins under the Baltimore, shall be mined without any connection with the overlying seams. Both of these shafts were down to the rock, and about twenty-five feet into the solid rock at the end of the year, and the concrete cribbing was completed. The cribbing is forty-five feet in depth.

A rock tunnel has been driven from the Upper to Lower Baltimore vein in the north workings of the Henry colliery. The total length of which is 569 feet. The second opening for this tunnel is a shaft from the Upper to Lower Baltimore vein, forty-one feet in depth.

During the year connection has been made through the Barrier pillar between the Henry and Wyoming collieries in the Baltimore vein, so that each shaft will act as a second opening for the other colliery in case of an emergency.

The old Mountain tunnel of the Maltby colliery was reopened in 1900, and during the year a second opening, which is a tunnel on an elevation of about 200 feet vertically lower than the Mountain tunnel, was driven from the Four Foot vein which cut all of the veins developed by the Mountain tunnel, a distance of 593 feet, at which point work was stopped, it not yet having reached the Red Ash vein.

### Examination of Mine Foremen.

The annual examination of applicants for certificates of qualification for mine foreman and assistant mine foreman was held in this district on the 4th, 5th and 6th of June, 1901, at the rooms of Y. M. C. A., Pittston, Pa. The board of examiners was, H. McDonald, Mine Inspector; J. L. Carke, superintendent and John J. Morahan and David P. Williams, miners. Twenty applicants for mine foreman certificates were examined, and the follownig named were recommended to the Secretary of Internal Affairs for certificates: Henry Campbell and Oscar Alpaugh, of Pittston; Joseph F. Routledge Inkerman, Seward Putton, Anthony J. Healey, Wm. J. Kane, John F. Gilhooly and George A. Davies, of Avoca; John McCutcheon, Old Forge; James Frail, Coalridge; David S. Morris, Luzerne borough; Robert C. Wallice, Parsons, and Wm. E. Johnson, Bernice.

The following named received certificates of qualification for assistant mine foreman: John V. James, Henry H. Hughes and Chas. Pyne, Wyoming; John T. O. Boyle, Thos. H. Barrett, Maltby; Archie Ramage, Gwilym Evans, Chas. M. Williams, Christian Henzelmann, John Grubitz, Andro Sholtis, John H. King, Michael J. Egan, Pittston; John E. Earley, John J. Moore, Wm. J. Morgan, Walter J. Hutchings, Ebenezer Davis, Daniel J. Thomas, and John P. Mitchell, Avoca; Wm. Pattison, Ridgewood; Jas. J. Boyle, David J. Thomas, Plains; Wm. A. Piper, Edward J. Carlin, Luzerne; Wm. Gardner, Albert Harris, Parsons; Henry Nothoff, Wilkes-Barre, and Lewis S. Smith, Plainsville.

TABLE I—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Third Anthracite District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>Pennsylvania Coal Co.</b>						
Barnum No. 1 shaft, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Barnum No. 2 shaft, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Barnum No. 3 shaft, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Law's shaft, .....	Lackawanna, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 9, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 10, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 11, J.F., .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 1, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 2, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 3, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 4, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 5, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 6, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 7, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 8, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 9, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 10, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 11, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 12, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 13, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
Shaft No. 14, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
No. 6 washery, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
No. 5 washery, .....	Luzerne, .....	Wm. A. May, .....	Scranton, .....	Sidney Williams, .....	Dunmore, .....	Erie and Wyoming.
<b>Lehigh Valley Coal Co.</b>						
Prospect shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Oakdale shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Hillman slope, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Henry shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Exeter No. 1 shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Exeter No. 2 shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Hendelberg shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Hendelberg slope, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Matty shaft, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Matty slope, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Mineral Spring slope, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
Coal Brook slope, .....	Luzerne, .....	D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley.
<b>Hillside Coal and Iron Co.</b>						
Consolidated slope, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	Wm. W. Inglis, .....	Scranton, .....	Erie and Wyoming.
Consolidated shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	Wm. W. Inglis, .....	Scranton, .....	Erie and Wyoming.
Butler shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	Wm. W. Inglis, .....	Scranton, .....	Erie and Wyoming.
Butler tunnel, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	Wm. W. Inglis, .....	Scranton, .....	Erie and Wyoming.
Chapman shaft, .....	Luzerne, .....	W. A. May, .....	Scranton, .....	Wm. W. Inglis, .....	Scranton, .....	Erie and Wyoming.



Fernwood shaft.	Luzerne.	W. A. May.	Scranton.	Wm. W. Inglis.	Scranton.	Erie and Wyoming.
Fernwood tunnel.	Luzerne.	W. A. May.	Scranton.	Wm. W. Inglis.	Scranton.	Erie and Wyoming.
Temple Iron Co.						
Mount Lookout shaft.	Luzerne.	S. B. Thorne.	Scranton.	George Steele.	Wyoming.	Lehigh Valley.
Harry E. shaft.	Luzerne.	S. B. Thorne.	Scranton.	George Steele.	Wyoming.	Lehigh Valley.
Forty Fort shaft.	Luzerne.	S. B. Thorne.	Scranton.	George Steele.	Wyoming.	Lehigh Valley.
Babylon shaft.	Luzerne.	S. B. Thorne.	Scranton.	George Steele.	Wyoming.	Lehigh Valley.
Babylon slope.	Luzerne.	S. B. Thorne.	Scranton.	George Steele.	Wyoming.	Lehigh Valley.
Delaware and Hudson Co.						
Delaware shaft.	Luzerne.	C. C. Rose.	Scranton.	E. R. Petrebone.	Scranton.	Delaware and Hudson.
Louise shaft.	Luzerne.	C. C. Rose.	Scranton.	E. R. Petrebone.	Scranton.	Delaware and Hudson.
Louise tunnel.	Luzerne.	C. C. Rose.	Scranton.	E. R. Petrebone.	Scranton.	Delaware and Hudson.
Ladlin shaft.	Luzerne.	C. C. Rose.	Scranton.	E. R. Petrebone.	Scranton.	Delaware and Hudson.
Del.	Luzerne.	E. E. Loomis.	Scranton.	E. J. Evans.	Scranton.	Del., Lack. and Western.
Hallstead shaft.	Luzerne.	E. E. Loomis.	Scranton.	Montrose Barnard.	Kingston.	Del., Lack. and Western.
Pettebone shaft.	Luzerne.	E. E. Loomis.	Scranton.	Montrose Barnard.	Kingston.	Del., Lack. and Western.
Seneca Coal Co.						
Twin No. 1 shaft.	Luzerne.	S. D. Warriner.	Wilkes-Barre.	Eli T. Conner.	Wilkes-Barre.	Lehigh Valley.
Twin No. 2 shaft.	Luzerne.	S. D. Warriner.	Wilkes-Barre.	Eli T. Conner.	Wilkes-Barre.	Lehigh Valley.
Phoenix shaft.	Luzerne.	S. D. Warriner.	Wilkes-Barre.	Eli T. Conner.	Wilkes-Barre.	Lehigh Valley.
Columbia shaft.	Luzerne.	S. D. Warriner.	Wilkes-Barre.	Eli T. Conner.	Wilkes-Barre.	Lehigh Valley.
Raub Coal Co.						
Louise slope.	Luzerne.	S. J. Tonkins.	Luzerne.			Lehigh Valley.
Louise tunnel.	Luzerne.	S. J. Tonkins.	Luzerne.			Lehigh Valley.
Laurel Run Coal Co.						
Laurel Run slope.	Luzerne.	Geo. T. Neally.	Wilkes-Barre.			Erie.
State Line & Sullivan R. Co	Sullivan.	O. A. Baldwin.	Towanda.	R. E. Dunstan.	Towanda.	Lehigh Valley.
Bernice drift.	Sullivan.	O. A. Baldwin.	Towanda.	R. E. Dunstan.	Towanda.	Lehigh Valley.
Lykens drift.	Sullivan.	W. B. Gunton.	Bernice.			Lehigh Valley.
W. B. Gunton.						
Stevens Coal Co.						
Stevens shaft.	Luzerne.	H. W. Kingsbury.	Scranton.	David W. Evans.	Pittston.	Lehigh Valley.
Stevens slope.	Luzerne.	H. W. Kingsbury.	Scranton.	David W. Evans.	Pittston.	Lehigh Valley.
Wyoming Coal and Land Co.						
Griffith tunnel.	Luzerne.	F. H. Clemons.	Scranton.	S. B. Williams.	Wyoming.	Lehigh Valley.
Gardner Creek Coal Co.						
Gardner Creek tunnel.	Luzerne.	Clarence B. Sturges.	Scranton.			New York and Erie.
Crescent Coal Co.						
Crescent tunnel.	Luzerne.	Mathew Hart.	Ladlin.			Lehigh Valley.
Hicks River Coal Co.						
Morning Star tunnel.	Luzerne.	G. H. Tench.	Pittston.			Lehigh Valley.



TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
John C. Haddock.	Luzerne,.....	James B. Davies,...	Plymouth, .....	.....	.....	Del., Lack. and Western.
Black Diamond shaft, .....						
Clear Spring Coal Co.	Luzerne,.....	J. L. Cake, .....	Pittston, .....	.....	.....	Del., Lack. and Western.
Clear Spring shaft, .....						
Florence Coal Co., Limited.	Luzerne,.....	Chas. P. Ford, .....	Scranton, .....	.....	.....	Lehigh Valley and Erie.
Elmwood No. 1 shaft, .....	Luzerne,.....	Chas. P. Ford, .....	Scranton, .....	.....	.....	Lehigh Valley and Erie.
Elmwood No. 2 shaft, .....						
W. G. Payne & Co.	Luzerne,.....	W. E. Payne, .....	Kingston, .....	Wm. O. Williams, ..	Kingston, .....	Del., Lack. and Western.
East Boston shaft, .....						
Traders' Coal Co.	Luzerne,.....	Soloman Deeble,...	Avoca, .....	.....	.....	N. Y. & W., and C. R. R. of N. J.
Ridgewood slope, .....						
Avoca Coal Co.	Luzerne,.....	W. H. Hollister,...	Avoca, .....	.....	.....	L. V., E. & W. V.
Avoca shaft, .....						
Robertson & Law.	Luzerne,.....	John M. Robertson, ..	Moosic, .....	.....	.....	Erie & Wyoming Valley.
Katy Dtd slope, .....	Luzerne,.....	John M. Robertson, ..	Moosic, .....	.....	.....	Erie & Wyoming Valley.
Katy Dtd tunnel, .....						
Algonquin Coal Co.	Luzerne,.....	Geo. T. Neally, ....	Wilkes-Barre, .....	.....	.....	Erie.
Pine Ridge shaft, .....						
Wm. Richmond.	Luzerne,.....	Wm. Richmond,....	Yatesville, .....	.....	.....	New York and Erie.
Yatesville tunnel, .....						
North American Coal Co.	Luzerna,.....	James T. Sharkey, ..	Pittston, .....	.....	.....	Lehigh Valley.
Luzerne washery, .....						
Warnke Coal Co.	Luzerne,.....	Fred. Warnke, ....	Scranton, .....	.....	.....	Del., Lack. and Western.
Warnke washery, .....						

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employes, number of persons killed and injured, number of kegs of powder, etc., used in the Third Anthracite District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
<b>Pennsylvania Coal Co.</b>												
Barnum Nos. 1, 13 and 3 shafts, .....	Luzerne, .....	280,162.08	7,782	.....	287,944.08	169	745	1	7	11,011	284	65
Lawrence Nos. 9, 10 and 10 Jr., .....	Luzerne, .....	204,481.04	6,745	.....	211,226.04	165.7	559	3	1	5,241	1,533	62
Shafis Nos. 1 and 8, .....	Luzerne, .....	221,534.01	14,119	.....	235,649.01	166.8	643	2	5	7,345	2,088	82
Shafis Nos. 9, 10 and 10 Jr., .....	Luzerne, .....	158,534.06	3,585	.....	162,119.06	165.1	451	2	1	4,162	953	49
Hoyte and Nos. 1 and 7 shafts, .....	Luzerne, .....	258,292.09	16,963	.....	275,255.09	139.8	882	7	2	19,371	7,566	76
Shafis Nos. 5, 6 and 11, .....	Luzerne, .....	290,802.18	10,817	.....	301,719.18	158	886	1	2	1,270	932	82
Nos. 14 shaft and tunnels, .....	Luzerne, .....	34,234.13	2,319	.....	36,553.13	2	90	1	.....	.....	.....	62
No. 6 washery, .....	Luzerne, .....	58,578.08	781	.....	59,359.08	113.7	49	.....	.....	.....	.....	1
No. 8 washery, .....	Luzerne, .....	72,123.18	1,488	.....	73,611.18	117.6	47	1	.....	.....	.....	1
Total, .....	.....	1,609,591.05	64,599	.....	1,674,490.05	162.6	4,276	16	33	51,866	15,124	457
<b>Lehigh Valley Coal Co.</b>												
Prospect shaft, .....	Luzerne, .....	355,660.15	26,510	1,569.02	382,739.17	209.85	907	7	12	9,272	41,675	105
Oakwood shaft, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming shaft, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Midvale shaft, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Henry shaft, .....	Luzerne, .....	226,780.00	2,680	3,092.00	232,552.00	.....	548	.....	6	6,705	30,776	77
Exeter Nos. 1 and 2 shaft, .....	Luzerne, .....	360,045.04	18,019	6,864.10	384,923.14	227.80	684	5	14	7,569	124,821	56
Heidelberg shaft, .....	Luzerne, .....	111,206.10	11,985	2,432.00	125,640.10	178.35	295	1	.....	4,168	3,666	40
Heidelberg slope, .....	Luzerne, .....	137,640.03	4,650	1,750.10	143,735.03	107.75	312	2	.....	4,071	3,739	53
Maitbay shaft, slope and tunnel, .....	Luzerne, .....	135,017.05	15,131	1,750.10	151,898.15	107.75	Idle.	3	4	4,415	29,774	84
Total, .....	.....	1,326,369.17	78,375	15,795.02	1,430,477.19	176.95	2,756	18	36	36,233	225,381	415

TABLE II—Continued.

Names of Operators and Collieries.		County.											
		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.	
Hillside Coal and Iron Co.	Consolidated slope, .....	155,736.04	5,009	807.00	161,552.04	179.45	537	1	6	5,535	622	55	
	Consolidated shaft, .....	165,397.04	10,557	842.10	176,706.14	188.90	529	1	1	7,443	3,163	64	
	Butler shaft and tunnel, .....	91,352.03	13,687	641.19	105,680.13	168.60	423	3	3	4,934	7,911	57	
	Fernwood shaft and tunnel, .....												
	Total, .....	412,385.11	29,253	2,291.00	443,939.11	175.65	1,499	5	10	17,912	11,636	168	
Temple Iron Co.	Mt. Lookout shaft, .....	181,649.02	44,084	6,717.12	232,450.14	190.2	563	7	10	9,246	16,560	70	
	Harry E. shaft, .....	246,514.16	23,062	2,936.97	272,513.03	241.8	573	1	6	8,000	4,875	81	
	Forty Fort shaft, .....	91,284.00	9,441	.....	100,725.00	241.8	220	1	3	3,950	1,840	38	
	Babylon shaft and slope, .....	7,769.13	9,000	163.69	16,872.13	8	10	.....	.....	357	400	57	
	Total, .....	527,217.11	85,587	9,756.19	622,561.10	226.6	1,366	9	19	22,153	23,275	246	
Delaware and Hudson Co.	Langcliffe shaft, .....	57,792.04	9,520	770.10	68,082.14	76.25	388	1	1	2,606	2,255	37	
	Langcliffe shaft and tunnel, .....	119,389.19	5,125	689.16	125,204.15	152.25	385	2	11	4,561	7,762	62	
	Ladlin shaft, .....	83,713.04	6,283	1,865.62	91,864.66	125	265	2	.....	2,639	11,682	35	
	Total, .....	290,895.07	20,931	3,425.08	335,151.15	118.17	1,038	5	12	9,866	15,619	135	
	Del., Lack'a and Western R. R. Co.	Hallstead shaft, .....	61,918.10	8,349	2,677.10	72,325.00	144.90	265	2	2	3,521	765	37
	Pettebone shaft, .....	310,141.17	16,060	9,623.65	335,766.02	200.60	741	.....	12	8,700	5,400	75	
	Total, .....	372,069.07	24,349	11,680.15	408,090.02	172.75	1,006	2	14	12,221	6,105	112	





TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Hicks River Coal Co.	Luzerne.....	3,898.00	400	850.00	5,148.00	91	37	.....	1	339	3	6
Morning Star tunnel, .....	Wm. Richmond.	15,180.06	1,410	16.00	16,636.06	125	.....	.....	.....	1,470	650	14
Yatesville tunnel, .....	Luzerne.....	4,422.00	128	415.00	4,965.00	16	*	.....	.....	.....	.....	.....
North American Coal Co.	Luzerne.....	25,859.04	690	.....	26,549.04	115	25	.....	.....	.....	.....	1
Luzerne washery, .....	Luzerne.....	1,896,650.17	169,118	95,118.09	2,070,887.06	162.5	5,713	29	49	78,109	95,836	79
Warnke Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Warnke washery, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Abandoned January, 1901.

## Recapitulation.

Pennsylvania Coal Co., .....	64,590	1,674,490.05	162.6	4,276	16	33	51,866	15,124	457
Lehigh Valley Coal Co., .....	78,375	1,428,477.19	176.95	2,755	18	36	16,233	235,81	445
Hillside Coal and Iron Co., .....	29,273	2,291.00	226.60	1,366	9	19	22,153	23,275	246
Temple Iron Co., .....	85,587	9,756.19	622,561.10	1,366	9	19	22,153	23,275	246
Delaware and Hudson Co., .....	20,931	3,325.08	285,151.15	1,038	5	12	9,806	15,019	135
Del., Lack'a & West, R. R. Co., .....	24,349	11,680.15	408,090.02	1,006	2	14	12,221	6,165	112
Miscellaneous Coal Co's, .....	169,118	95,118.09	172.75	5,713	29	49	78,109	95,836	79
Total, .....	472,212	137,965	6,925,598	17,651	84	173	228,360	333,076	2,212

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Total horse power.			Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.	Electric.									
Pennsylvania Coal Co., .....	Luzerne, .....	35	1,400	51	7,605	9,005	10	5	.....	123	15,041	30	23,792	11,530	.....	.....	6
Lehigh Valley Coal Co., .....	Luzerne, .....	27	1,917	34	6,700	8,617	9	.....	.....	95	14,837	20	13,841	11,733	.....	3	4
Hillside Coal and Iron Co., .....	Luzerne, .....	24	720	23	2,083	2,803	5	.....	1	31	1,050	6	2,440	2,310	.....	.....	.....
Temple Iron Co., .....	Luzerne, .....	24	736	17	4,575	5,151	4	.....	.....	34	4,480	14	11,451	9,010	.....	3	6
Delaware and Hudson Co., .....	Luzerne, .....	24	720	11	1,350	2,070	2	.....	3	37	1,810	5	4,950	3,055	.....	.....	2
Del. Lackawanna and Western R. R. Co., .....	Luzerne, .....	41	1,060	8	1,940	2,040	.....	.....	.....	29	2,374	8	7,000	4,710	.....	2	8
Miscellaneous coal companies, .....	Luz. & Sul., .....	109	3,087	87	10,758	13,845	11	.....	2	178	12,234	34	23,030	13,090	.....	3	.....
Total, .....	.....	284	9,420	221	34,113	43,533	41	5	6	587	51,325	117	86,567	51,462	.....	11	26



Heidelberg shaft, .....	1	1	60	58	24	1	20	165	1	6	7	65	4	47	139	295
Heidelberg slope, .....	1	1	67	58	28	.....	.....	21	176	1	5	66	4	54	135	312
Malthy shaft, slope and tunnel, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	11	16	597	577	273	69	362	1,885	5	60	67	185	20	531	871	2,776
Hillside Coal and Iron Co.																
Consolidated slope, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butler shaft and tunnel, .....	2	.....	178	167	47	4	21	419	1	5	5	46	1	60	118	537
Chapman shaft, .....	2	2	122	87	57	2	54	336	1	9	16	87	3	87	203	539
Fernwood shaft and tunnel, .....	1	.....	126	64	49	9	48	251	1	11	9	58	3	50	132	423
Total, .....	5	2	439	318	153	15	123	1,046	3	25	30	191	7	197	453	1,499
Temple Iron Co.																
Mt. Lookout shaft, .....	2	3	173	91	53	11	56	389	1	11	24	63	4	71	174	563
Harry E shaft, .....	1	5	144	110	58	19	38	375	1	10	11	101	2	73	198	573
Forty Fort shaft, .....	1	1	73	60	21	10	32	198	1	5	9	.....	1	6	22	220
Babylon shaft and slope, .....	1	2	.....	.....	.....	.....	.....	.....	1	1	5	.....	.....	.....	7	10
Total, .....	5	11	390	261	132	40	126	965	4	27	49	164	7	150	401	1,396
Delaware and Hudson Co.																
Delaware shaft, .....	2	.....	68	80	34	11	46	241	1	6	14	85	1	40	147	388
Lancaster shaft and tunnel, .....	2	.....	112	73	46	4	27	264	1	7	7	57	2	47	121	385
Lafin shaft, .....	1	.....	62	39	16	4	15	137	1	7	6	36	1	57	128	246
Total, .....	5	.....	242	192	96	19	88	642	3	20	27	198	4	144	396	1,038
Del. Lack & West, R. R. Co.																
Hallstead shaft, .....	1	2	42	44	22	4	29	144	1	3	12	55	1	49	121	265
Pettebone shaft, .....	2	3	174	160	78	25	164	546	1	9	14	105	2	64	195	711
Total, .....	3	5	216	204	100	29	193	690	2	12	26	160	3	113	316	1,006
Seneca Coal Co.																
Twin Nos. 1 and 2 shafts, .....	4	5	208	164	81	18	62	542	1	10	22	69	6	117	225	767
Phoenix and Columbia shafts, ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raub Coal Company.																
Louise slope and tunnel, .....	3	1	105	40	40	3	30	222	1	6	17	60	3	51	138	360
John C. Haddock.																
Black Diamond shaft, .....	1	3	50	41	41	9	25	170	1	6	17	71	2	33	131	301
Clear Spring Coal Co.																
Clear Spring shaft, .....	2	4	176	136	74	49	83	524	1	8	11	78	4	32	134	658
Florence Coal Co., Limited.																
Elmwood Nos. 1 and 2 shafts, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Inside foreman or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	(Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.		Total outside.
W. G. Payne & Co.	Luzerne,.....	4	3	102	80	69	15	38	311	1	4	16	85	5	59	170	481
East Boston shaft, .....	Luzerne,.....	2	1	102	50	45	10	26	236	1	6	7	42	4	34	94	330
Traders' Coal Co.	Luzerne,.....	3	1	112	79	35	8	21	259	1	3	3	52	3	46	108	367
Ridgewood slope, .....	Luzerne,.....	1	.....	50	50	18	4	15	138	1	3	8	24	2	17	56	194
Avoca shaft, .....	Luzerne,.....	2	4	161	155	81	9	50	462	1	8	11	130	3	59	212	674
Robertson and Law.	Luzerne,.....	1	3	65	60	47	13	52	241	1	5	5	60	3	39	113	354
Katy Did slope and tunnel,.....	Sullivan,.....	1	.....	57	8	10	6	15	137	1	6	8	14	4	63	96	233
Algonquin Coal Co.	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201
Pine Ridge shaft, .....	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201
Laurel Run Coal Co.	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201
State Line and Sullivan R. Co.	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201
Bernice drift, .....	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201
W. B. Gunton.	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201
Lykens drift, .....	Sullivan,.....	1	.....	60	60	10	1	12	144	.....	2	2	30	2	21	57	201

Stevens Coal Co.	2	4	100	91	38	6	37	287	1	6	15	30	4	50	105	393
Stevens shaft and slope, .....																
Wyoming Coal and Land Co.	1	1	67	24	26	5	17	141	1	6	7	23	3	31	71	212
Griffith tunnel, .....																
Gardner Creek Coal Co.																
Gardner Creek tunnel, .....																
Luzerne, .....																
Crescent Coal Co.	1		4	4	2				11	1	3	4	2		11	22
Crescent tunnel, .....																
Hicks River Coal Co.	1		10	8	4				1	1	2	4	1	4	13	37
Morning Star tunnel, .....																
Wm. Richmond.																
Yatesville tunnel, .....	1		30	28	9	1	3	72	1	2	2	25	2		32	104
North American Coal Co.																
Luzerne washery, .....																
Luzerne, .....																
Warnke Coal Co.																
Warnke washery, .....																
Luzerne, .....																
Total, .....	31	30	1,508	1,078	630	157	487	3,921	17	83	159	805	57	671	1,792	5,713

\*Men on strike since August.

†This company ceased operations on August 17, 1901.

## Recapitulation.

Pennsylvania Coal Co., .....	18	26	1,189	1,032	522	109	258	3,154	9	36	137	429	7	494	1,192	4,976
Lehigh Valley Coal Co., .....	11	16	597	577	273	59	352	1,885	5	60	67	185	20	534	871	2,776
Hillside Coal and Iron Co., .....	5	2	430	318	153	15	123	1,046	3	25	30	191	7	197	453	1,499
Temple Iron Co., .....	5	11	390	261	132	40	126	985	4	27	49	164	7	150	401	1,366
Delaware and Hudson Co., .....	5		242	192	86	19	88	642	3	20	27	198	4	144	395	1,038
Del., Lack'a and West R. R. Co., .....	3	5	216	204	100	29	133	690	2	12	26	160	3	113	316	1,006
Miscellaneous coal companies, .....	31	30	1,508	1,078	630	157	487	3,921	17	83	159	805	57	671	1,792	5,713
Total, .....	78	90	4,572	3,662	1,906	428	1,567	12,303	43	263	495	2,142	105	2,303	5,351	17,654

TABLE III.—Continued.

Names of Operators and Collieries.	County.	Total.												
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Pennsylvania Coal Co. ....	Luzerne.....	17.3	12.4	16.5	13.6	13.7	14.8	11.4	14.7	11.5	11.5	12.5	14.6	162.6
Lehigh Valley Coal Co. ....	Luzerne.....	19.2	16.9	18.1	11.3	17.8	18.6	9.8	15.3	16.5	17.7	17.6	14	176.9
Hillside Coal and Iron Co., .....	Luzerne.....	18.2	13.6	16.2	14	12.8	15.8	14.2	16.2	13.3	11.3	15.1	13.5	175.6
Temple Iron Co., .....	Luzerne.....	22.8	19.1	22.2	14	22.6	12.8	13	20.5	20.3	22	16.8	18.3	226.6
Delaware and Hudson Co., .....	Luzerne.....	.....	.....	12.5	13	13.3	8.3	10.6	16.8	15.4	15.5	14.5	10.7	118.2
Delaware, Lackawanna and Western R. Co., .....	Luzerne.....	17	14.3	16.1	13.6	13.5	14.3	16.5	17.2	15.5	16.4	17.6	15.8	172.7
Miscellaneous coal companies, .....	Luz. & Sul. ....	18.3	13.8	14.4	13.6	14.8	13.8	14.1	15.8	15.7	15.4	15.4	15	180.1
Total, .....	.....	138.8	15	16.6	13.3	15.4	14.1	12.8	16.6	15.4	17.7	15.6	14.8	*173.25

\*Average time.

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Third Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 2	David J. Williams, ..	Welsh, .....	Mine boss, .....	36	M.	1	2	Laurel Run slope, ..	Luzerne,...	{ These men entered Laurel Run slope working and were suffocated by damp from a fire in workings of the Delaware shaft. Instantly killed by fall of top coal. After firing a blast, he went under it to work out loose coal, when the top coal fell on him.
3	Wm. Morgan, .....	Welsh, .....	Asst. boss, .....	60	M.	1	1	Laurel Run slope, ..	Luzerne,...	
5	Martin Fortune, ....	Irish, .....	Fire boss, .....	60	M.	1	2	Laurel Run slope, ..	Luzerne,...	
11	Antidan Oriani, ....	Italian, .....	Miner, .....	29	S.	.....	.....	Ridgewood slope, ...	Luzerne,...	
15	Alex. Chester, .....	American, ..	Driver, .....	15	S.	.....	.....	No. 13 shaft, .....	Lackawann	Killed while riding between loaded car coming out gangway road by falling between them.
21	Morris Monahan, ...	Irish, .....	Door boy, .....	16	S.	.....	.....	Hillman slope, .....	Luzerne,...	Killed while sitting on bumper of loaded car at foot of inside slope by an empty car coming down slope.
23	Signo Putnietz, .....	Italian, .....	Miner, .....	26	S.	.....	.....	Ridgewood slope, ...	Luzerne,...	Killed in a breast adjoining his own by a fall of rock; after firing a blast for the other miner. He returned to face to see the effects and the rock fell on him.
24	John J. O. Malley, ..	Irish, .....	Miner, .....	38	M.	1	1	Black Diamond shaft	Luzerne,...	Killed while working at face of his breast by fall of rock; the roof was well propped but it was bad.
30	Joseph Sandy, .....	Italian, .....	Miner, .....	47	M.	1	1	Fernwood shaft, ....	Luzerne,...	Fatally injured while drawing out a stick of dynamite by the blast of his fan, and died next day; his laborer was slightly injured at the same time.
31	Patrick Brennan, ...	American, ..	Laborer, .....	27	S.	.....	.....	No. 14 shaft, .....	Luzerne,...	Fatally injured and died next day by a fall of rock while working at face of breast in Checker vein.
31	Daniel Mulhern, ....	American, ..	Laborer, .....	25	S.	.....	.....	No. 4 shaft, .....	Luzerne,...	Fatally injured by fall of rock while loading a car at face of breast in Checker vein.
Feb. 9	Michael Bly, .....	Irish, .....	Miner, .....	45	M.	1	6	Clear Spring shaft,	Luzerne,...	Fatally injured; having been struck by a prop which was knocked out by a fall of coal; died next day.



TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
16	Anthony Devers, ...	Irish, .....	Miner, .....	42	S.	...	...	No. 1 shaft, .....	Luzerne, ...	Instantly killed by a fall of rock at face of breast; was told by his fellow miner to be careful or it would fall on him.
16	Michael Powal, ....	Slav, .....	Laborer, .....	31	M.	1	2	Matthy breaker, .....	Luzerne, ...	Killed by a runaway car on breaker plane.
25	John Stretensky, ....	Slav, .....	Laborer, .....	40	M.	1	3	Prospect shaft, .....	Luzerne, ...	Killed by a fall of rider coal. Was barring it down at the time.
26	Alfred Vanderhoof, ..	American, ..	Laborer, .....	22	S.	...	...	Matthy slope, .....	Luzerne, ...	Instantly killed by fall of coal while helping his miner to drill a hole.
March 12	Wm. Marsonis, .....	Pole, .....	Laborer, .....	23	S.	...	...	Clear Spring shaft, ..	Luzerne, ...	Killed by a fall of rock at the face of breast; the miner had fired a blast which dislodged the props, allowing a piece of rock to fall.
15	Nicholas Lungavius, ..	Pole, .....	Miner, .....	42	W.	...	1	Lafin shaft, .....	Luzerne, ...	Fatally burned and bruised by a premature blast while forcing a cartridge into a hole; died April 7.
20	Lewis Kuculas, .....	Pole, .....	Miner, .....	37	M.	1	...	Twin No. 2 shaft, ..	Luzerne, ...	Killed by a fall of rock.
21	Patrick McClain, ...	American, ...	Miner, .....	44	M.	1	6	No. 5 shaft, .....	Luzerne, ...	Killed by fall of rock. His attention was called to the danger by his laborer, but he said it was all right.
28	George Shedlock, ....	Slav, .....	Miner, .....	39	M.	1	5	Prospect shaft, .....	Luzerne, ...	Killed while riding up the inside slope. He was ordered off by the footman, but refused to get off, and was caught by a low timber and dragged over top of cars.
29	Morgan Davies, .....	Welsh, .....	Miner, .....	55	M.	1	...	Ridgewood slope, ..	Luzerne, ...	Instantly killed by fall of rock. Fell of heavy coal and rock while taking out the pillars on the gangway road. They went into an old breast and fired a blast when the fall took place.
29	Angelo Scotch, .....	Italian, ....	Laborer, .....	40	M.	1	...	Ridgewood slope, ..	Luzerne, ...	Fatally injured; his miner was taking the pillars out when Handless thought he heard the roof crack; he jumped toward the road and struck his head against a loaded car with such force as to fracture his skull; died the same day.
30	Frank Handless, ....	German, ....	Laborer, ....	35	S.	...	...	Barnum No. 3 shaft, ..	Luzerne, ...	

April	30	Stanley Merleski, ....	Pole, .....	Laborer, .....	45	M.	1	3	Louise slope, .....	Luzerne, ...	Killed by fall of coal and rock while mining out loose coal.
	3	John Mersheski, ....	Pole, .....	Laborer, .....	35	M.	1	....	Heidelberg No. 2, ...	Luzerne, ...	Fatally injured by a premature blast; he drilled a hole and lighted the match, but before he got to a place of safety the shot exploded, the flying coal struck him on the head; he died April 7.
	23	Con. McHugh, .....	American, ..	Co. miner, .....	55	M.	1	1	Laurel Run slope, ..	Luzerne, ...	Fatally injured while bailing water in
	23	Michael Stanock, ....	Pole, .....	Miner, .....	44	M.	1	2	Griffith tunnel, .....	Luzerne, ...	Instantly killed by a fall of rock in the
	23	Joe Jozock, .....	Pole, .....	Laborer, .....	44	M.	1	4	Griffith tunnel, .....	Luzerne, ...	Cross entrance, the gas was bad, but the miner failed to secure it.
	24	George Teets, .....	American, ..	Driver, .....	17	S.	....	....	Heidelberg No. 1, ...	Luzerne, ...	Fatally injured; it was supposed that he was kicked by the mule he was driving. He was found on the side of gangway road. He could not speak and died before he was taken outside. There were no marks on his body.
	25	John Wyto, .....	Pole, .....	Miner, .....	28	S.	....	....	Mt. Lookout shaft, ..	Luzerne, ...	Fatally burned by gas; he fired a blast which cut a gas feeder and in going back to examine what the blast had done, he ignited the gas.
	29	Alex. Lesnick, .....	Pole, .....	Miner, .....	30	M.	1	....	No. 11 shaft, .....	Luzerne, ...	Instantly killed by a fall of rock in a cage full of men was being hoisted and the footman had rung the bell to engineer to hoist, when Lesnick came out, and just as the cage started he tried to get on. The men on cage told him to keep off as bell was rung, but he tried to get on and fell into the shaft.
May	3	Joseph Richcar, ....	Slav, .....	Miner, .....	32	M.	1	2	Pine Ridge shaft, ...	Luzerne, ...	Fatally injured by a fall of rock in Hillman vein. Died same day.
	6	Joseph Gibbs, .....	Lithuanian, ..	Laborer, .....	32	S.	....	....	Exeter No. 2 shaft, .	Luzerne, ...	Fatally injured in Red Ash vein by fall of top coal while loading a car; died the same day.
	7	James Young, .....	American, ..	Driver, .....	15	S.	....	....	No. 13 shaft, .....	Lack'a, ....	Killed while drawing a trip of two loaded cars out the gangway road, by falling under the cars.
	9	Daniel Calvery, .....	Irish, .....	Runner, .....	19	S.	....	....	Consolidated slope, ..	Luzerne, ...	Fatally injured by a fall of top coal.
	13	Michael Flannery, ..	American, ..	Laborer, .....	40	M.	1	....	Heidelberg No. 1, ...	Luzerne, ...	Fatally injured on culm bank; while unhitching his mule from culm car he slipped and fell in front of car, which ran on him; he died May 20.
	15	Thomas Brown, .....	Irish, .....	Culm driver, ....	19	S.	....	....	Langcliffe shaft, ....	Luzerne, ...	Fatally injured; his leg was crushed between empty cars. Died the next day.
	21	John Taylor, .....	Welsh, .....	Shaft footman, ..	47	S.	....	....	Hallstead shaft, ....	Luzerne, ...	Fatally injured by fall of rock. Was told by the miner not to get under this rock, but he answered that he knew as much about the roof as the miner did, as he was a miner himself. He died next day.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
22	Nicholas Lanzes,	Italian, .....	Car loader, .....	20	S.	...	...	No. 10 breaker, .....	Luzerne,...	Instantly killed while running a railroad car from one chute to another under the breaker. He failed to get the brake to work and jumped off the car in front, fell over his head, and the car wheel passed over his body.
23	Anthony Pennone, ..	Italian, .....	Miner, .....	25	S.	...	...	Fernwood shaft, .....	Luzerne,...	Killed by a fall of rock at face of breast. Had fired a blast in the coal and returned to examine the result.
28	John Jozenskle, .....	Pole, .....	Laborer, .....	25	S.	...	...	Pine Ridge shaft, ..	Luzerne,...	Killed by a fall of rider coal and slate while loading a car at face of breast.
June 3	Joseph Hope, .....	Scotch, .....	Miner, .....	29	M.	1	2	Pine Ridge shaft, ...	Luzerne,...	Killed by a blast he was firing; the match had burned over half, but he ignited it again, and failed to get to a place of safety before the shot exploded.
24	Charles Butkavage,	Pole, .....	Laborer, .....	24	S.	...	...	Mt. Lookout shaft, ..	Luzerne,...	Fatally burned by gas. He went into an abandoned breast and ignited gas at the face.
July 12	Paul Sherval, .....	Slav, .....	Miner, .....	32	S.	...	...	Maltby shaft, .....	Luzerne,...	Face of breast exploded, a premature blast he was firing killed July 15.
30	Enoch Miller, .....	Pole, .....	Miner, .....	35	S.	...	...	Forty Fort shaft, ...	Luzerne,...	Killed by a blast in Cress cut he was driving to the adjoining breast, which was almost through, and the miner fired a blast from the opposite side, and he warned Miller to get away, but he failed to heed the warning.
Aug. 1	Anthony Runta, .....	Lithuanian, .....	Laborer, .....	40	M.	1	5	East Boston shaft, ..	Luzerne,...	Killed by a runaway car on inside slope.
3	Turk Tulay, .....	Pole, .....	Laborer, .....	32	M.	1	1	Ladin, outside, .....	Luzerne,...	Killed while unloading railroad car into chute; a loaded car which had been run down to be unloaded struck the car he was in, knocking him through the door in the bottom of car and crushing him on the track.

8	Wm. Suscavage, ...	Pole, .....	Laborer, .....	33	M.	1	2	Midvale slope, .....	Luzerne, ...	Killed by a fall of top coal in Counter gangway. Had broken into an old breast. The miner went across this breast, and while away, the laborer took a pick and undermined the coal, which fell on him. Killed by a premature blast he was firing. Killed by a fall of rock on gangway road; a fall had occurred the night before, and Ryan and the timber were ordered to clean it up, and while doing so a large slab fell on him.
9	Victor T. Kemper, ...	Pole, .....	Miner, .....	35	M.	1	3	Mt. Lookout shaft, ...	Luzerne, ...	Instantly killed by a fall of rock while taking out pillars in Marcy vein.
11	James Ryan, .....	American, ...	Driver boss, .....	42	W.	3	3	Midvale slope, .....	Luzerne, ...	Killed by a fall of rock at face of breast. Killed by a fall of rock; he fired a blast which knocked out two props, and before resting them the roof came down on him.
20	Joseph Popory, .....	Pole, .....	Miner, .....	27	M.	1	....	Langoliffe tunnel, ...	Luzerne, ...	Killed by being caught by a revolving shaft. He left his blade of work and climbed up a fall of rock, and was standing on a ledge of a shaft.
21	Anthony Gwalis, ...	Pole, .....	Laborer, .....	21	S.	....	....	Clear Spring shaft, ...	Luzerne, ...	Killed by a blast. After waiting a sufficient time for the blast to explode, as he thought, he went back and had reached the face when it exploded.
24	John Griscavage, ...	Pole, .....	Miner, .....	30	S.	....	....	No. 5 shaft, .....	Luzerne, ...	Fatally burned by an explosion of gas; died next day. The mule he was driving ran away into an old abandoned working; he with another boy followed after the mule and ignited the gas with their open lights.
24	George Pointon, ...	American, ...	Slate picker, ...	12	S.	....	....	Avoca breaker, ....	Luzerne, ...	Fatally scalded by steam; he went up the slope to shut the steam off to repair the pump, and while closing the valve the top of it blew off and the nitre pressure of steam came on him; died the next day.
Sept. 4	Andrew Badavarich, ...	Pole, .....	Miner, .....	27	M.	1	2	Stevens slope, .....	Luzerne, ...	Killed by fall of rock.
11	Roy Metcalf, .....	English, ...	Driver, .....	16	S.	....	....	Stevens slope, .....	Luzerne, ...	Fatally killed by fall of rock in Marcy vein. The rock was ported by slings or seams all around; died on the way to hospital.
10	Michael Barrett, ...	Irish, .....	Pumpman, .....	25	M.	1	5	Hillman slope, .....	Luzerne, ...	Fatally burned by powder while preparing a cartridge. He placed his lamp on the edge of box and a spark flew in the powder he was handling. Died the same day.
24	Michael Kerrigan, ...	American, ...	Laborer, .....	33	S.	....	....	Ridgewood slope, ....	Luzerne, ...	Instantly killed by falling off the bucket in the air shaft while going to work in shaft. How they fell is not known, as when they were ready to be lowered they gave the signal, and almost instantly their bodies struck the bottom.
26	George Morofski, ...	Pole, .....	Laborer, .....	28	S.	....	....	Mount Lookout shaft	Luzerne, ...	
26	Paul Swalens, .....	Pole, .....	Miner, .....	30	M.	1	2	Prospect shaft, .....	Luzerne, ...	
29	George Wallace, ...	American, ...	Machinist, .....	43	M.	1	5	Twin No. 1 shaft, ...	Luzerne, ...	
29	Joseph Connolly, ...	Irish, .....	Miner, .....	45	M.	1	7	Twin No. 1 shaft, ...	Luzerne, ...	



TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
30	Andrew Koclovitch,	Pole, .....	Laborer, .....	31	M.	1	1	Mt. Lookout shaft,	Luzerne...	Killed by falling down the shaft, a distance of 100 feet. He was working on the night shift and descended the shaft and got off the cage on the empty car side and walked about 10 feet away, turned about and walked back, and was told by the footman to keep back, but he kept on and walked in the shaft.
Oct. 2	Thomas Collins, .....	American, .....	Runner, .....	25	S.	.....	.....	Harry E shaft, .....	Luzerne...	Fell from a 12-in. steam pipe in the inside slope at the lift burst. Collins shut it off, went through the old workings and ignited some gas which was in a hole in the roof; he died next day.
3	Michael Batka, .....	Pole, .....	Driver, .....	21	S.	.....	.....	Exeter No. 2 shaft,	Luzerne...	Killed by fall of roof while riding on car coming out a breast.
7	Ignatz Zalesky, .....	Pole, .....	Miner, .....	37	M.	1	.....	Exeter No. 1 shaft,	Luzerne...	The miner was killed and laborer fatally injured by fall of coal at face of their breast. The laborer died Oct. 9.
7	John Dudash, .....	Austrian, ..	Laborer, .....	43	S.	.....	.....	Exeter No. 1 shaft,	Luzerne...	Killed by fall of rider coal.
9	Peter Patrowsky, ...	Pole, .....	Laborer, .....	20	S.	.....	.....	Mt. Lookout shaft, ..	Luzerne...	Was drawing back the top bench of coal about 30 inches thick. The laborer went under the rider coal above this bench and it fell on him.
10	Steve Belock, .....	Pole, .....	Laborer, .....	25	M.	1	.....	Chapman shaft, ....	Luzerne...	Killed by a tribe of cars while walking up the inside slope, was told not to do so by another man who came out to manway with him.
22	William Price, .....	American, ..	Track layer, ...	35	S.	.....	.....	No. 9 shaft, .....	Luzerne...	Killed by a piece of rock falling out of the roof in an abandoned gangway.
30	Alec Donnell, .....	Pole, .....	Laborer, .....	38	S.	.....	.....	Twin No. 1 shaft, ...	Luzerne...	Fatally burned by gas; went up to face of breast, having been told by fire boss all was right, and ignited the gas and died the next day. The fire boss said he examined the place and found no gas.

Nov.	15	Adam Koltz, .....	Pole, .....	Miner, .....	31	M.	1	3	Delaware shaft, ....	Luzerne,...	Fatally burned by gas while going into a cross entrance with an open light, when he should have used a safety lamp.
	16	Stanley Forah, .....	Slav, .....	Miner, .....	50	M.	1	6	Mt. Lookout shaft, ..	Luzerne,...	Fatally injured by a premature blast before he got to a place of safety; died the next day.
	25	Patrick Gallagher, .	Irish, .....	Laborer, .....	28	M.	1	.....	Laurel Run slope, ..	Luzerne,...	Fatally injured by fall of rock on gangway road.
Dec.	3	Joe Faulchiskie, ....	Pole, .....	Laborer, .....	34	M.	1	1	Griffith Tunnel, ....	Luzerne,...	Fatally injured by fall of rock while shoveling coal back from the face of breast, died same day.
	6	Gilbert Parker, .....	American, .	Screen tender, ..	15	S.	.....	.....	Exeter washery, ....	Luzerne,...	Killed; his clothing caught on sett screw of shaft and was wind around it. He left a place of work and climbed up into a slate chute and under revolving shaft.
	7	Anthony Fauland, ....	Austrian, ..	Laborer, ..	43	M.	1	.....	Hallstead, outside, ..	Luzerne,...	Suffocated by gas from burning culm bank; he was dumping a mine car of rock when the car tipped over, bottom side up; he opened the door of car to pull the rock out, and in doing so got under the bottom of car and was suffocated.
	13	John Brogan, .....	American, .	Driver, .....	14	S.	.....	.....	Laws shaft, .....	Luzerne,...	Killed by being caught between empty car and rib on gangway road.
	17	Patrick Blibow, .....	Irish, .....	Roll tender, ....	19	S.	.....	.....	Fernwood breaker, .	Luzerne,...	Killed; his clothing caught in machinery of scraper line; left his place of work and climbed on top of machinery, which was boxed in, his head went through a crack in the roof, he was in stooping position.
	18	Charles Vandozer, ..	American, .	Driver, .....	15	S.	.....	.....	No. 8, outside, .....	Luzerne,...	Killed by being thrown from a mule while riding to the barn; his foot caught in the harness and he was dragged a considerable distance.
	20	Dmytro Fillipchuk, ..	Pole, .....	Laborer, .....	35	M.	1	.....	No. 6 shaft, .....	Luzerne,...	These two laborers were instantly killed at same time by a fall of soapstone in the airway while taking it down.
	20	John Ambrozitshuk, ..	Pole, .....	Laborer, .....	27	M.	1	.....	No. 6 shaft, .....	Luzerne,...	Smothered in culm chute. After the breaker stopped for the day, Ross and another boy tried to push the culm down, and he was caught in the rush.
	21	Nell Ross, .....	Italian, ....	Olter, .....	17	S.	.....	.....	Ewen breaker, .....	Luzerne,...	

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Third Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.								
3	Wm. Earley.	Irish	Fire boss.	32	M.	Laurel Run slope.	Luzerne.	Overcome by gases from mine fire in belair shaft.
5	Edward Garthan.	American.	Laborer.	20	S.	No. 14 tunnel.	Luzerne.	Fingers crushed by gas.
10	Joseph Cevode.	Irish.	Miner.	51	M.	Langcliffe tunnel.	Luzerne.	Ribs broken by coal from a runaway car.
10	Frank Kordaski.	Pole.	Miner.	40	M.	Wyoming shaft.	Luzerne.	Severely injured by a premature blast.
14	Simon Wascealus.	Lithuanian.	Laborer.	24	M.	Exeter No. 1 shaft.	Luzerne.	Back injured by fall of rock.
16	Matt Gemotowitz.	Lithuanian.	Miner.	29	S.	No. 5 shaft.	Luzerne.	Face and hands burned by gas.
16	Mike Corcoran.	Irish.	Laborer.	35	S.	No. 5 shaft.	Luzerne.	Head and hands bruised by fall of rock.
18	Gurlyn Amos.	Welsh.	Driver.	17	S.	Pettebone shaft.	Luzerne.	Leg broken while taking sprag out of car wheel.
25	John Luke.	English.	Miner.	40	M.	Pine Ridge shaft.	Luzerne.	Foot crushed by fall of fire clay.
28	Clement Martiscavage.	Pole.	Miner.	38	M.	Harry shaft.	Luzerne.	Burned on face and hands by gas; arms opened their safety lamps.
28	Joseph Polach.	Pole.	Laborer.	34	S.	Harry B shaft.	Luzerne.	Back broken by coal falling from pillar at face of breast.
29	Thomas Mitchell.	English.	Miner.	31	M.	Pettebone shaft.	Luzerne.	Slightly injured by the explosion of dynamite that his miner was handling, which killed the miner.
30	Joseph Fushandy.	Italian.	Laborer.	23	M.	Fernwood shaft.	Luzerne.	Face and hands burned by gas. Collar bone broken while spragging a car.
Feb.								
7	Lalis Sviostkie.	Pole.	Miner.	34	M.	Mt. Lookout shaft.	Luzerne.	Leg broken; struck by a car.
8	Matt Brennan.	Irish.	Driver.	15	S.	Barnum No. 3 shaft.	Luzerne.	Severely bruised by a fall of rock.
8	Joseph Wasley.	American.	Laborer.	26	M.	No. 14 tunnel.	Luzerne.	Leg crushed while attempting to jump on cars.
12	Edward Toole.	Irish.	Team driver.	20	S.	Consolidated slope.	Luzerne.	Face cut and bruised by coal from a blast.
12	John Rowan.	Russian.	Miner.	27	M.	Oakwood shaft.	Luzerne.	
12	Paul Cesaak.	Scotch.	Laborer.	23	M.	Barnum No. 3 shaft.	Luzerne.	
15	Thomas Halstie.	Scotch.	Miner.	41	M.	Pine Ridge shaft.	Luzerne.	
15	Daniel Mulronee.	American.	Driver.	17	S.	Pine Ridge shaft.	Luzerne.	
18	Thos. D. Rowland.	Welsh.	Fire boss.	42	M.	Langcliffe shaft.	Luzerne.	

18	Jas. Mongenell, .....	Italian, .....	Miner, .....	24	M. Butler tunnel, .....	Luzerne, .....	Struck on stomach by end of rail while assisting to put car on track.
18	Stanley Lickoski, .....	Pole, .....	Laborer, .....	24	S. No. 6 shaft, .....	Luzerne, .....	Slightly burned on face and hand by gas.
19	Austin Mulcahey, .....	American, .....	Laborer, .....	18	S. No. 4 shaft, .....	Luzerne, .....	Skull fractured by coal from blast.
25	Steve Pastor, .....	Slav, .....	Miner, .....	37	M. Prospect shaft, .....	Luzerne, .....	Severely cut and bruised by fall of coal.
26	Edward Fuslice, .....	American, .....	Driver, .....	16	S. No. 6 shaft, .....	Luzerne, .....	Leg broken by plane rope.
26	Robert Bainbridge, .....	American, .....	Laborer, .....	31	M. Hallstead shaft, .....	Luzerne, .....	Fingers crushed by pump.
5	Adam Rice, .....	Pole, .....	Driver, .....	19	S. Prospect shaft, .....	Luzerne, .....	Back bruised by fall of rock.
7	Lewis Baynak, .....	Pole, .....	Door boy, .....	15	S. Maltby shaft, .....	Luzerne, .....	Hips and back bruised; caught between car and brattice.
9	John Bennett, .....	American, .....	Slate picker, .....	13	S. Consolidated breaker, .....	Luzerne, .....	Caught by sett screw on shaft in breaker.
9	Henry Tucker, .....	American, .....	Driver, .....	37	M. Mt. Lookout shaft, .....	Luzerne, .....	Injured between car and brattice.
14	James Brown, .....	English, .....	Miner, .....	28	M. Katy Dld slope, .....	Luzerne, .....	Burned by powder which he was forcing in drill hole.
16	John T. Price, .....	Welsh, .....	Driver, .....	21	S. Elmwood, outside, .....	Luzerne, .....	Leg broken; while spragging culm car.
20	Andrew Srockman, .....	Hungarian, .....	Laborer, .....	22	S. Black Diamond shaft, .....	Luzerne, .....	Head cut by fall of rock.
20	John Gorsitt, .....	Pole, .....	Laborer, .....	24	S. Louise slope, .....	Luzerne, .....	Head cut by a fall of rock.
22	James Williams, .....	American, .....	Laborer, .....	46	M. Mt. Lookout, outside, .....	Luzerne, .....	Leg crushed between car bumpers.
26	Michael Williams, .....	Slav, .....	Miner, .....	41	M. Prospect shaft, .....	Luzerne, .....	Face burned by powder while carting cartridges by fall of rock.
29	John Williams, .....	Welsh, .....	Miner, .....	45	M. Ridgwood slope, .....	Luzerne, .....	Painfully bruised by fall of rock.
4	S. P. Bellas, .....	American, .....	Laborer, .....	28	M. Maltby, outside, .....	Luzerne, .....	Painfully bruised by culm sliding from mine.
9	Peter Markallinas, .....	Pole, .....	Miner, .....	29	M. Exeter No. 1 shaft, .....	Luzerne, .....	Head cut by fall of rock.
9	Michael Cotcavage, .....	Slav, .....	Laborer, .....	33	M. Harry E shaft, .....	Luzerne, .....	Back bruised by fall of rock.
10	Stanley Kruphnsky, .....	Pole, .....	Driver, .....	14	S. Fernwood shaft, .....	Luzerne, .....	Jaw bruised by gin pole breaking and striking him.
15	Adam Latch, .....	Pole, .....	Miner, .....	35	M. Pine Ridge shaft, .....	Luzerne, .....	Face and hands burned by gas.
17	Chas. Feathers, .....	German, .....	Miner, .....	45	M. Louise slope, .....	Luzerne, .....	Body bruised by coal from blast.
17	Steve Matura, .....	Slav, .....	Laborer, .....	18	S. Mt. Lookout shaft, .....	Luzerne, .....	Face and hand burned by gas.
21	Wm. Davies, .....	American, .....	Laborer, .....	35	M. East Boston shaft, .....	Luzerne, .....	Finger cut off while lifting coal into car.
23	Robert Whitley, Jr., .....	American, .....	Driver, .....	18	S. Mt. Lookout shaft, .....	Luzerne, .....	Ankle and arm sprained; fell under cars.
25	Thos. Moore, .....	American, .....	Miner, .....	32	M. No. 4 shaft, .....	Luzerne, .....	Severely injured by a premature blast.
25	Wm. Tilley, .....	Welsh, .....	Miner, .....	43	M. No. 4 shaft, .....	Luzerne, .....	Thigh broken by fall of rock.
25	Thomas M. Jones, .....	American, .....	Miner, .....	55	W. Ridgwood slope, .....	Luzerne, .....	Foot and ankle broken; caught in wheel.
29	Frank Zavelinski, .....	Pole, .....	Slate picker, .....	14	S. Langcliffe breaker, .....	Luzerne, .....	Hips severely squeezed; was leaning over car and was struck by door frame.
29	Wm. Robertson, .....	American, .....	Driver, .....	20	S. Exeter No. 1 slope, .....	Luzerne, .....	
1	Michael Smith, .....	American, .....	Driver, .....	17	S. Pine Ridge shaft, .....	Luzerne, .....	Knee cut by car.
3	John Clark, .....	American, .....	Driver, .....	16	S. Langcliffe shaft, .....	Luzerne, .....	Kicked by mule he was hitching to a car.



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
7 7 7	Patrick Sharp, John S. Burke, James Burke,	Irish, Irish, Irish,	Trackman, Plane headman, Driver,	42 32 18	S. M. S.	Henry shaft, Henry shaft, Henry shaft,	Luzerne, Luzerne, Luzerne,	These men were severely burned by the explosion of 8 kegs of powder. While hoisting the powder in a car up Gravity plane, the brake broke, allowing the trip to run away; the empty cars struck the drum with such force as to explode the powder. Feet and hands cut by coal from blast.
8	John Botoha,	Slav,	Miner,	27	S.	Harry E shaft,	Luzerne,	Leg broken by fall of coal.
9	James Osborne,	Irish,	Miner,	36	M.	Consolidated slope,	Luzerne,	Leg broken by coal from blast.
10	August Zurander,	Slav,	Miner,	24	M.	Exeter No. 2 shaft,	Luzerne,	Painfully squeezed by cars.
14	John Pavlowski,	Pole,	Laborer,	44	M.	Haltstead shaft,	Luzerne,	Leg broken by fall of rock.
15	Angelo Lucero,	Italian,	Miner,	23	S.	Stevens shaft,	Luzerne,	Body painfully bruised while running car.
15	Theophilus Evans,	Welsh,	Runner,	24	S.	Pettebone shaft,	Luzerne,	Painfully squeezed while riding between cars.
22	Frank Judge,	American,	Runner,	23	S.	Laurel Run slope,	Luzerne,	Leg bruised while cleaning track.
23	Michael Apple,	Hungarian,	Laborer,	40	M.	Forty Fort shaft,	Luzerne,	Leg broken by fall of rock.
27	John Hashilinsky,	Slav,	Laborer,	40	S.	Exeter No. 2 shaft,	Luzerne,	Arm broken by prop timber while taking it out of cage.
8	Frank D. Juda,	Lithuanian,	Shaft footman,	20	S.	Oakwood shaft,	Luzerne,	Hand blown at wrist while handling stick of dynamite.
11	Thomas Scott,	American,	Miner,	27	M.	Langcliffe shaft,	Luzerne,	Leg broken while uncoupling cars.
13	Peter Elm,	Austrian,	Miner,	45	M.	Pettebone shaft,	Luzerne,	Skull fractured and ribs broken by premature blast.
15	John Cabore,	American,	Door boy,	15	S.	East Boston shaft,	Luzerne,	Head cut and chest bruised by premature blast.
24	Patrick Flynn,	Irish,	Miner,	45	M.	Pettebone shaft,	Luzerne,	Arm painfully cut; knocked from railroad car.
25	Thos. Miles,	American,	Miner,	32	S.	No. 9 shaft,	Luzerne,	Body severely bruised by fall of rock.
28	Michael Goydoes,	Hungarian,	Slate picker,	13	S.	East Boston breaker,	Luzerne,	
28	Edward Jones,	Welsh,	Laborer,	35	S.	Exeter No. 1 shaft,	Luzerne,	

July	2	Wm. Anthony, .....	American, .....	Driver, .....	14	No. 10 breaker, .....	Luzerne, .....	Leg cut; fell off under car.
	3	Wm. Stewart, .....	German, .....	Driver, .....	15	No. 2 shaft, Barnum, .....	Luzerne, .....	Hips squeezed; fell in front of cars.
	3	Edward Carter, .....	American, .....	Door tender, .....	15	No. 9 shaft, .....	Luzerne, .....	Leg crushed by car, necessitating amputation.
	3	Frank Sabos, .....	Hungarian, .....	Door tender, .....	19	Maltby tunnel, .....	Luzerne, .....	Leg broken; struck by car.
	12	John Dando, .....	Slav, .....	Laborer, .....	42	Exeter No. 2 shaft, .....	Luzerne, .....	Head cut; a piece of coal fell on him.
	12	Joseph Berton, .....	English, .....	Miner, .....	51	East Boston shaft, .....	Luzerne, .....	Head cut and ribs broken by coal falling on him.
	15	Joseph Meloy, .....	Slav, .....	Laborer, .....	37	Exeter No. 2 shaft, .....	Luzerne, .....	Burned on face and hands by gas.
	15	Dennis Rabiet, .....	American, .....	Runner, .....	23	Exeter No. 2 shaft, .....	Luzerne, .....	(caused by the runners leaving a door open on gangway read while running car out of a breast.
	15	Edward Davies, .....	American, .....	Runner, .....	24	Exeter No. 2 shaft, .....	Luzerne, .....	Leg broken; kicked by a mule.
	26	John Mulroy, .....	American, .....	Driver, .....	15	No. 6 shaft, .....	Luzerne, .....	(burned on face and hands by gas while lighting fuse to fire a blast.)
Aug.	31	Joseph Watkins, .....	Welsh, .....	Miner, .....	44	Stevens slope, .....	Luzerne, .....	Head cut by fall of rock.
	31	Joseph Stanowski, .....	Pole, .....	Laborer, .....	23	Stevens slope, .....	Luzerne, .....	Head and body cut by coal from blast.
	31	George Cadwalader, .....	American, .....	Miner, .....	45	East Boston shaft, .....	Luzerne, .....	Head squeezed between cars while rock fell between them.
	1	Michael Larence, .....	Slav, .....	Miner, .....	57	Maltby slope, .....	Luzerne, .....	Head bruised by car jumping track on him.
	1	Clarence Miles, .....	American, .....	Door tender, .....	14	Barnum No. 2 shaft, .....	Luzerne, .....	(The miners leg was broken and lacerated by fall of coal in breast.)
	3	Paul Zetterman, .....	Pole, .....	Runner, .....	23	Black Diamond shaft, .....	Luzerne, .....	Face and hands slightly burned by gas ignited by one of them opening his safety lamp.
	5	Frank Prucayvich, .....	Lithuanian, .....	Miner, .....	35	East Boston shaft, .....	Luzerne, .....	Body severely bruised by falling under a car.
	5	Ignatz Sholas, .....	Lithuanian, .....	Laborer, .....	34	East Boston shaft, .....	Luzerne, .....	Hand cut and bruised while spragging cars.
	5	Anthony Bastus, .....	Pole, .....	Miner, .....	26	Stevens slope, .....	Luzerne, .....	Leg bruised by a piece of coal sliding on him.
	5	Fred Buckweith, .....	English, .....	Runner, .....	19	Stevens slope, .....	Luzerne, .....	Leg cut and bruised; fell from culm.
	8	Joseph Williams, .....	American, .....	Runner, .....	19	Oakwood shaft, .....	Luzerne, .....	Head bruised by fall of rock.
	12	Leo Delmore, .....	American, .....	Runner, .....	16	Barnum breaker, .....	Luzerne, .....	Leg broken by fall of soapstone.
	12	Richard White, .....	American, .....	Miner, .....	32	Griffith tunnel, .....	Luzerne, .....	Hand cut by piece of rock falling on it.
	17	Wm. Weitz, .....	American, .....	Culm driver, .....	16	No. 8 breaker, .....	Luzerne, .....	Thigh broken; kicked by mule.
	20	John Kubachko, .....	Pole, .....	Miner, .....	33	Langcliffe tunnel, .....	Luzerne, .....	Hard crushed in gear wheels; put his hand down to scute to clean it, instead of using a broom.
	21	Edward McDonald, .....	American, .....	Laborer, .....	22	Consolidated slope, .....	Luzerne, .....	Painfully bruised; fell into coal scute.
	21	John Morsan, .....	Welsh, .....	Brattice man, .....	37	Exeter No. 2 shaft, .....	Luzerne, .....	Severely bruised by fall of coal.
	21	Wm. Dougherty, .....	American, .....	Driver, .....	16	Exeter No. 2 shaft, .....	Luzerne, .....	Lashed on head and body bruised by fall of coal.
	24	Albert Slassick, .....	Pole, .....	Roll tender, .....	20	Fernwood breaker, .....	Luzerne, .....	Head and back cut by a fall of top coal.
	26	Wm. Loftus, .....	American, .....	Slate picker, .....	17	No. 6 breaker, .....	Luzerne, .....	Hand crushed between car bumpers.
Sept.	26	Michael Kertsick, .....	Slav, .....	Miner, .....	25	Miltvale slope, .....	Luzerne, .....	
	28	Toll Zelinski, .....	German, .....	Miner, .....	42	Langcliffe shaft, .....	Luzerne, .....	
	28	Clarence Robertson, .....	American, .....	Driver, .....	16	No. 11 shaft, .....	Luzerne, .....	
	4	John Zeluskes, .....	Pole, .....	Miner, .....	39	Exeter No. 2 shaft, .....	Luzerne, .....	
	5	Travor Jones, .....	American, .....	Door boy, .....	15	Pettebone shaft, .....	Luzerne, .....	



22	Alex Weida, .....	Pole, .....	Laborer, .....	25	S. Louise tunnel, .....	Luzerne, .....	Leg, broken and back bruised by fall of rock.
25	John Vono, .....	Slav, .....	Oiler, .....	36	M. Barnum breaker, .....	Luzerne, .....	Leg broken while handling sheet iron in breaker; it fell on him.
25	Joseph Kaledo, .....	Slav, .....	Miner, .....	25	S. Mt. Lookout shaft, .....	Luzerne, .....	Face and hands burned by powder.
26	John Alinsky, .....	Pole, .....	Miner, .....	40	M. Crag shaft, .....	Luzerne, .....	Arm broken by a fall of rock.
28	Tom Gibbons, .....	American, .....	Driver, .....	16	S. East Boston shaft, .....	Luzerne, .....	Leg broken, while unbitching his mule from car; mule turned and caught the drivers leg against car.
28	Henry Hope, .....	Scotch, .....	Driver, .....	17	S. Pine Ridge shaft, .....	Luzerne, .....	Foot crushed; caught between car bumpers.
Nov.							
4	Daniel Daley, .....	American, .....	Door boy, .....	15	S. Harry E shaft, .....	Luzerne, .....	Head and body squeezed by cage. Head and legs cut by coal from a blast.
7	Teofil Zilinski, .....	German, .....	Miner, .....	42	M. Langcliffe shaft, .....	Luzerne, .....	Ribs bruised by coal from blast.
8	George Bleweysky, .....	Pole, .....	Miner, .....	44	W. Laurel Run slope, .....	Luzerne, .....	Ribs bruised by a mule falling on them while shoeing it.
9	Michael Murphy, .....	Irish, .....	Miner, .....	53	M. Petebone shaft, .....	Luzerne, .....	Painfully squeezed by falling under cars.
11	Con. Boyle, .....	Irish, .....	Blacksmith, .....	35	M. Petebone shaft, .....	Luzerne, .....	Leg broken by coal coming down chute.
11	Wm. Walker, .....	American, .....	Laborer, .....	52	M. Petebone, .....	Luzerne, .....	Back and legs cut by coal from a blast.
13	Edward Connors, .....	Irish, .....	Driver, .....	16	S. Consolidated slope, .....	Luzerne, .....	Leg broken by falling under cars.
15	John Danshie, .....	Pole, .....	Laborer, .....	28	S. Avoca shaft, .....	Luzerne, .....	Leg broken by falling under cars. These seven men were more or less severely burned by an explosion of gas. When the explosion took place all the men were using safety lamps. In my examination I found a safety lamp operated in a cross cut, which I doubt was the cause of explosion.
16	Patrick McCabe, .....	Irish, .....	Miner, .....	64	S. Harry E. shaft, .....	Luzerne, .....	Leg broken while attempting to ride on scraper line.
16	Patrick Donnelly, .....	Irish, .....	Driver, .....	18	S. Morning Star tunnel, .....	Luzerne, .....	Leg broken; kicked by a mule.
19	Joseph Macputa, .....	Pole, .....	Miner, .....	37	M. No. 11 shaft, .....	Luzerne, .....	Leg broken by fall of rock.
22	Joseph Jolus, .....	Pole, .....	Laborer, .....	21	S. Stevens slope, .....	Luzerne, .....	Leg broken by fall of rock.
22	George Wagolis, .....	Pole, .....	Laborer, .....	26	S. Stevens slope, .....	Luzerne, .....	Leg broken by fall of top coal.
22	John Goditshus, .....	Pole, .....	Laborer, .....	24	S. Stevens slope, .....	Luzerne, .....	Leg and ribs broken by fall of soapstone.
22	Henry Powell, .....	Welsh, .....	Fire boss, .....	43	M. Stevens slope, .....	Luzerne, .....	
22	Adam Parris, .....	Pole, .....	Miner, .....	24	S. Stevens slope, .....	Luzerne, .....	
22	Edg. Cusick, .....	Pole, .....	Miner, .....	21	S. Stevens slope, .....	Luzerne, .....	
22	Mike Trackomovich, .....	Pole, .....	Miner, .....	28	S. Stevens slope, .....	Luzerne, .....	
Dec.							
25	Oscar Ostrandet, .....	American, .....	Jig tender, .....	16	S. Ridgewood breaker, .....	Luzerne, .....	
25	Domnick Lavell, .....	Irish, .....	Driver, .....	25	S. Delaware shaft, .....	Luzerne, .....	
25	Frank Rouflosky, .....	Pole, .....	Laborer, .....	26	S. Forty Fort shaft, .....	Luzerne, .....	
29	Frank Hoffman, .....	American, .....	Miner, .....	43	M. Black Diamond shaft, .....	Luzerne, .....	
29	Martin Tomolis, .....	Lithuanian, .....	Miner, .....	45	M. Exeter No. 1 shaft, .....	Luzerne, .....	
2	Henry Bowket, .....	English, .....	Miner, .....	40	M. Avoca shaft, .....	Luzerne, .....	
4	Frank Mcke, .....	Slav, .....	Laborer, .....	26	S. Langcliffe tunnel, .....	Luzerne, .....	
4	Owen McLane, .....	Irish, .....	Miner, .....	56	M. No. 10 shaft, .....	Luzerne, .....	
9	Richard Wilkinson, .....	English, .....	Miner, .....	47	M. No. 5 shaft, .....	Luzerne, .....	
10	Cosmero Pizensuske, .....	Italian, .....	Miner, .....	41	W. Stevens shaft, .....	Luzerne, .....	
10	Matt Karsinskie, .....	Russian, .....	Miner, .....	45	M. Hillman slope, .....	Luzerne, .....	



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
11	John Robmasow, .....	Slav, .....	Miner, .....	35	M.	Mt. Lookout shaft, .....	Luzerne, .....	These three men were severely burned by gas by going into their breast in the morning against the fire bosses orders. Face cut and bruised by rail while putting car on track. Foot crushed by wheel of ash car. Leg and arm broken by fall of rock. Arm broken while riding on car; caught on collar on gangway. Hip dislocated by fall of top coal.
14	Martin Stabow, .....	Slav, .....	Laborer, .....	27	M.	Mt. Lookout shaft, .....	Luzerne, .....	
14	John Farington, .....	American, .....	Driver, .....	21	S.	Mt. Lookout shaft, .....	Luzerne, .....	
17	Frank Stanford, .....	Irish, .....	Co. laborer, .....	55	M.	Louise slope, .....	Luzerne, .....	
18	John Lashko, .....	Pole, .....	Ash wheeler, .....	34	M.	Prospect, outside, .....	Luzerne, .....	
20	Mike Ambrozitchuk, .....	Pole, .....	Miner, .....	30	M.	No. 6 shaft, .....	Luzerne, .....	
27	Patrick McAndrew, .....	Irish, .....	Driver, .....	16	S.	Pettebone shaft, .....	Luzerne, .....	
30	Chas. Guravich, .....	Pole, .....	Miner, .....	37	M.	Midvale slope, .....	Luzerne, .....	

# Fourth Anthracite District.

## LUZERNE COUNTY.

Office of Inspector of Mines,

Wilkes-Barre, Pa., February 18, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor herewith of submitting to you the annual report of the Fourth Anthracite District for the year ending December 31, 1901. I entered upon the duties of the office on the 25th of September, 1901, and have scarcely had time to become acquainted with the localities of the different mines in the district. The report contains the usual tabular statements of mine accidents, the quantity of coal produced, number of each class of employes and other useful memoranda.

Production of coal in tons for 1901, .....	9,891,332
Number of employes for 1901, .....	24,317
Average number of days worked in 1901, .....	191.07
Number of fatal accidents in 1901, .....	78
Number of non-fatal accidents in 1901, .....	322
Number of wives left widows in 1901, .....	53
Number of orphans in 1901, .....	126
Tons of coal mined per life lost in 1901, .....	126,812
Increase of production per life lost above that of 1900, .....	5,886
Number of citizens fatally injured in 1901, .....	56
Number of aliens fatally injured in 1901, .....	22
Number of citizens seriously injured in 1901, .....	194
Number of aliens seriously injured in 1901, .....	128
Increase of production as compared with that of 1900, .....	1,305,591

I have also included a short description of the explosion at the Buttonwood colliery of the Parrish Coal Company; also of the improvements made at the various mines throughout the district. The mines in general are in excellent condition, and are well ventilated.

Very respectfully,

E. E. REYNOLDS,

Inspector.

Production of Coal in Tons for the Year 1901, by the Several Companies.

Lehigh and Wilkes-Barre Coal Company, .....	2,883,213.09
Delaware and Hudson Canal Company, .....	1,447,915.10
Susquehanna Coal Company, .....	1,309,222.00
Kingston Coal Company, .....	954,545.00
Delaware, Lackawanna and Western Railroad Company, .....	992,746.11
Lehigh Valley Coal Company, .....	461,038.16
Red Ash Coal Company, .....	250,584.13
Parrish Coal Company, .....	633,832.08
Alden Coal Company, .....	265,592.17
West End Coal Company, .....	99,636.02
Warrior Run Coal Company, .....	175,667.07
Crescent Coal Mining Company, .....	500.00
Plymouth Coal Company, .....	138,834.04
Ayers and Brothers (Chauncey), .....	13,582.08
Sterling Coal Company Washery, .....	42,605.00
Total, .....	9,669,516.05

This Production is Divided as Follows.

Shipped to market by railroad, .....	8,840,663.06
Sold at mines for local use, .....	289,027.14
Used at mines for generating steam, .....	541,363.05
Total, .....	9,669,516.05

TABLE A—Showing number of lives lost, tons of coal produced per life lost, and per person injured, number of employees and number of employees per life lost and per person injured in 1901.

Names of Operators.	Number of lives lost.		Tons of coal produced per life lost.		Number of persons seriously injured.		Tons of coal produced per person seriously injured.		Number of persons employed.		Number employees per life lost.		Number of employees per person seriously injured.	
	21	6	137,296	131	22,009	6,185	294.5	47.5	137,296	131	22,009	6,185	294.5	47.5
Lehigh and Wilkes-Barre Coal Co.,	10	10	241,319	27	53,627	3,834	639	142	10	10	241,319	27	53,627	3,834
Delaware and Hudson Canal Co.,	10	10	130,922	72	18,183	4,064	406.4	56.4	10	10	130,922	72	18,183	4,064
Susquehanna Coal Co.,	10	10	106,961	15	63,686	2,300	256.3	153.1	10	10	106,961	15	63,686	2,300
Kingston Coal Co.,	5	5	198,549	30	33,092	2,483	596.6	99.4	5	5	198,549	30	33,092	2,483
Delaware, Lackawanna and Western Railroad Co.,	5	5	92,208	6	76,839	1,028	205.6	171.3	5	5	92,208	6	76,839	1,028
Lehigh Valley Coal Co.,	5	5	83,528	7	35,798	1,557	186	79.6	5	5	83,528	7	35,798	1,557
Red Ash Coal Co.,	10	10	63,383	13	48,756	1,519	151.9	116.8	10	10	63,383	13	48,756	1,519
Parrish Coal Co.,	4	4	66,398	2	132,796	615	153.7	307.5	4	4	66,398	2	132,796	615
Alden Coal Co.,	2	2	49,815	4	24,969	489	245.5	122.8	2	2	49,815	4	24,969	489
West End Coal Co.,	1	1	175,667	9	19,519	482	432.0	48	1	1	175,667	9	19,519	482
Warrior Run Coal Co.,	1	1	138,834	5	27,757	429	429.0	85.8	1	1	138,834	5	27,757	429
Crescent Coal Mining Co.,	1	1	13,582	1	13,582	150	150.0	150.0	1	1	13,582	1	13,582	150
Plymouth Coal Co.,	1	1	13,582	1	13,582	150	150.0	150.0	1	1	13,582	1	13,582	150
Ayers and Bros. (Chauncey),	1	1	13,582	1	13,582	150	150.0	150.0	1	1	13,582	1	13,582	150
Sterling washery,	1	1	13,582	1	13,582	150	150.0	150.0	1	1	13,582	1	13,582	150
Total,	78	78	123,968	322	30,030	24,317	311.8	75.5	78	78	123,968	322	30,030	24,317

Names of Operators.



## Classification of Fatal and Non-Fatal Accidents.

Causes of Accidents.	Fatal.	Non-fatal.
By explosions of fire damp, .....	16	52
By falls of roof and coal, .....	23	104
By mine cars in the mines, .....	12	59
By explosions of powder and blasts, .....	6	20
By falling down shafts, .....	1	.....
From miscellaneous causes in the mines, .....	6	46
From miscellaneous causes on the surface, .....	9	40
Total, .....	78	322

In addition to the above there were 188 slight accidents reported which were not included.

TABLE B.—Classification of fatal accidents in the Fourth Anthracite District for the year 1901.

1901.	Causes of Fatal Accidents.										Occupations of Persons Fatally Injured.										Nationality of Persons Fatally Injured.									
	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Falling down shafts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	Miners.	Laborers.	Drivers.	Runners.	Door tenders.	Timber and brattice men.	Inside company men.	Engineers.	On surface.	Total.	American.	Austrian.	Slav.	Pole.	Lithuanian.	English.	Welsh.	Irish.	German.	Total.		
January.	1	4	1	1	1	1	1	6	1	3	1	1	1	1	1	1	1	6	3	1	1	1	1	1	1	1	1	6		
February.	2	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	3	1	1	1	1	1	1	1	1	1	9		
March.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
April.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
May.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
June.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
July.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
August.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
September.	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	9		
October.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
November.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
December.	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	8		
Total.	16	28	12	6	1	6	9	78	29	14	5	1	3	3	14	1	8	78	21	1	4	20	7	8	8	8	1	78		

TABLE C—Classification of serious non-fatal accidents.

1901.	Causes of Non-Fatal Accidents.						Occupations of Persons Seriously Injured.						Nationality of Persons Seriously Injured.						Total.									
	Explosions of gas.	Falls of roof and coal.	By mine cars.	Explosions of powder and blasts.	Miscellaneous, inside.	Miscellaneous, outside.	Total.	Miners.	Laborers.	Drivers.	Runners.	Door tenders.	Timber and brattice men.	Inside company men.	Engineers.	On surface.	Total.	American.		Austrian.	Slav.	Pole.	Lithuanian.	English.	Welsh.	Irish.	German.	Italian.
January.	6	11	3	4	4	3	36	12	11	4	1	2	1	3	3	8	36	6	1	1	14	5	3	4	3	1	...	36
February.	11	4	10	1	3	3	40	18	3	4	2	1	...	6	6	2	14	1	...	1	3	3	6	6	2	...	...	40
March.	1	11	2	4	4	3	26	11	6	1	1	1	1	1	1	3	20	4	...	2	20	3	1	1	1	...	...	26
April.	1	10	3	2	1	4	26	11	5	1	1	1	1	1	1	3	24	3	...	2	11	1	2	1	1	...	...	24
May.	3	9	1	4	4	3	27	10	6	2	...	2	...	...	...	5	27	4	2	1	11	2	3	3	1	...	...	27
June.	...	4	5	4	2	2	27	8	4	1	1	...	...	...	...	3	18	3	2	2	7	2	3	3	2	1	...	18
July.	...	13	4	2	...	...	36	17	3	1	1	2	...	2	...	2	36	4	...	2	13	4	3	3	3	...	...	36
August.	6	13	4	2	...	...	36	17	3	1	1	2	...	2	...	2	36	4	...	2	13	4	3	3	3	...	...	36
September.	9	10	4	...	...	...	24	0	7	1	1	2	...	...	...	2	24	9	...	2	13	4	1	4	...	1	...	24
October.	9	14	9	2	6	1	41	15	3	7	...	3	1	6	...	1	41	8	1	1	15	4	4	4	5	...	...	41
November.	4	4	3	1	...	...	16	5	4	2	2	2	...	...	...	1	16	7	...	1	5	4	2	4	...	...	...	16
December.	2	3	3	...	3	1	20	4	3	2	...	1	...	3	...	1	20	9	1	...	3	2	3	1	...	...	...	20
Total.	52	104	59	20	46	41	322	123	74	28	7	14	2	31	2	41	322	68	4	12	118	25	15	33	27	17	2	332

1901.

TABLE D—Showing the quantity of air circulating through the mines of the Fourth Anthracite District at the end of the year 1901.

Name of Mine.	Kind of Fan.	Diameter—feet.	Revolutions per minute.	Water Gauge at fan— Inches.	Number of fans.	Number of splits.	Number of persons employed.	Cubic feet of air per minute at inlet.	Cubic feet of air per minute at face of work- ings.	Cubic feet of air per minute at outlet.
Hollenback No. 2.	Guibal.	35	50	1.25	4	9	276	252,680	297,240	286,240
South Wilkes-Barre No. 3.	Guibal.	35	45	2	1	10	375	220,000	178,700	148,200
South Wilkes-Barre No. 5.	Guibal.	35	45	2	1	10	368	129,200	107,100	144,880
Stanton No. 7.	Guibal.	24	67	1.6	3	14	460	325,550	307,550	351,300
Sugar Notch No. 9.	Guibal.	24	66	1.2	2	9	368	325,000	257,900	350,400
Lance No. 11.	Guibal.	35	49	2	3	10	409	428,850	331,700	483,700
Nottingham No. 15.	Guibal.	24	70	1.6	5	9	670	302,000	258,300	340,000
Reynolds No. 16.	Guibal.	24	68	2	1	6	232	105,070	54,900	108,150
Wanamaker No. 18.	Guibal.	18	72	0.6	3	7	301	100,950	85,550	107,000
Maxwell No. 20.	Guibal.	24	80	1.5	2	6	109	96,900	77,700	105,850
Maxwell No. 20.	Guibal.	35	40	1.5	2	10	474	334,300	390,520	331,440
Total Lehigh and Wilkes-Barre.					27	100	4,141	2,635,500	2,116,100	2,892,890
Baltimore No. 2.	Guibal.	18	84	2.50	2	4	250	156,150	89,900	162,400
Baltimore No. 3.	Guibal.	18	80	1.25	1	5	225	174,200	86,950	180,400
Baltimore No. 4.	Guibal.	16	70	1.10	1	7	155	120,220	84,120	130,200
Conyngham No. 1.	Guibal.	17	90	1.60	1	4	153	150,560	123,000	180,200
Conyngham No. 2.	Guibal.	20	80	1.80	1	3	143	84,450	80,550	88,420
Boston.	Guibal.	22	60	2.00	1	6	226	105,940	88,180	106,160
Plymouth No. 2.	Guibal.	28	70	2.70	2	7	357	296,500	182,700	312,300
Plymouth No. 3.	Guibal.	19	55	1.60	3	8	390	275,430	246,820	284,330
Plymouth No. 4.	Guibal.	17	114	1.80	1	4	237	145,650	121,400	162,900
Plymouth No. 5.	Guibal.	22	75	2.70	1	8	221	161,000	148,600	179,600
Total D. and H. Canal Co.					14	56	2,357	1,675,840	1,272,620	1,786,330



TABLE D—Continued.

Name of Mine.	Kind of Fan.	Diameter—feet.	Revolutions per minute.	Water gauge at fan— inches.	Number of fans.	Number of splits.	Number of persons employed.	minute at inlet.	Cubic feet of air per minute at face of work- ings.	Cubic feet of air per minute at outlet.
South shaft No. 1, .....	Guibal, .....	25	65	1.5	3	3	9	178,100	136,200	187,100
North shaft No. 1, .....	Guibal, .....	22.5	65	1.7	2	2	9	160,700	104,400	183,200
North shaft No. 2, .....	Guibal, .....	25	62	1.6	2	2	6	107,600	82,900	118,100
Slope No. 4, .....	Guibal, .....	20	90	1.9	3	3	280	108,000	117,300	172,200
Shaft No. 4, .....	Guibal, .....	20	40	.4	1	1	21	69,600	51,000	71,000
Shaft No. 5, .....	Guibal, .....	8	135	1.1	1	1	36	41,000	31,000	42,000
Shaft No. 5, .....	Guibal, .....	20	76	1.1	1	1	384	109,170	89,750	109,570
Shaft No. 6, .....	Guibal, .....	25	62	1.4	1	1	208	118,000	87,600	119,000
Slope No. 6, .....	Guibal, .....	20	60	.9	1	1	118	41,500	39,800	47,700
Total Susquehanna Coal Co., .....					15	48	2,269	999,070	748,330	1,051,870
Shaft No. 1, Kingston, .....	Guibal, .....	26	86	2.5	2	1	188	93,200	77,800	106,700
Shaft No. 2, Kingston, .....	Guibal, .....	24	78	1.4	1	1	282	123,000	104,000	129,200
Shaft No. 3, Kingston, .....	Guibal, .....	24	78	1.4	1	1	185	55,000	27,800	56,900
Shaft No. 4, Kingston, .....	Guibal, .....	25	75	2.5	1	1	304	81,500	56,300	85,600
Gaylord, .....	Guibal, .....	24	58	1.1	1	1	103	45,300	27,700	52,600
Total Kingston Coal Co., .....					6	24	1,062	398,000	316,600	431,000
Woodward No. 1, .....	Guibal, .....	20	46	2.5	1	1	359	298,700	184,500	294,600
Woodward No. 2, .....	Guibal, .....	16	46	2.5	1	1	284	113,400	107,500	152,000
Avondale, .....	D. L. & W., .....	18	45	1.5	2	1	229	167,900	155,900	216,000
Espey tunnel, .....	Guibal, .....	19	420	2	1	1	50	50,100	42,800	58,200
Bliss, Red Ash, .....	Guibal, .....	35	34	1.2	1	1	57	57,600	50,100	60,900
Bliss, Hillman, .....	Guibal, .....	35	34	1.2	1	1	12	14,400	10,000	17,000
Bliss, Baltimore, .....	Guibal, .....	35	34	1.2	1	1	161	59,100	48,200	67,700
Total Del., Lack. & West. R. R. Co., .....					8	39	1,183	680,800	599,400	806,400

Dorrance, .....	Guibal, .....	35	50	1.9	2	16	375	311,200	228,500	354,000
Franklin, .....	Guibal, .....	15.5	60	.5	4	14	239	246,800	134,700	275,200
Total Lehigh Valley Coal Co., .....	.....	.....	.....	.....	6	30	674	528,000	361,200	629,200
Parrish, .....	Guibal, .....	22	75	2.2	2	7	296	114,000	100,000	118,400
Buttonwood, .....	Guibal, .....	20	70	1.7	2	10	653	222,600	202,800	245,800
Total Parrish Coal Co., .....	.....	.....	.....	.....	4	17	1,049	336,600	302,800	364,200
Dodson, .....	Guibal, .....	20	80	1.7	1	4	246	106,800	85,600	108,600
Warrior Run, .....	Guibal, .....	20	74	1.25	1	4	260	70,200	50,300	84,000
Red Ash, .....	Guibal, .....	17	68	1.2	2	5	221	76,700	68,000	80,700
Chauncey, .....	Natural, .....	.....	.....	.....	.....	3	31	28,600	7,400	29,400
Hadleigh, .....	Guibal, .....	20	70	.2	1	3	83	23,300	21,000	24,200
West End, .....	Guibal, .....	17½	75	1.4	4	5	343	121,810	70,470	154,460
Alden, .....	Guibal, .....	24	62	1.1	2	13	319	214,100	186,000	249,000
Total for all collieries, .....	.....	.....	.....	.....	91	352	14,338	7,905,320	6,195,900	8,715,220

### Explosion at the Buttonwood Colliery.

An explosion of fire damp; causing the death of six men and seriously injuring six others; occurred at about 2 o'clock P. M., October 25, 1901, at the Buttonwood colliery of the Parrish Coal Company. At 1 P. M., as William Morris, who was driving the No. 4 Hillman seam plane extension, was unloading a set of cross-timbers from a car at the face, his laborer ignited some feeders with his naked light, which slightly burned two laborers in the face of the airway which is driven parallel with, and for the purpose of ventilating the plane. Morris and his laborers and August Weiss, the airway miner, thought they had extinguished the burning feeders and went home with the injured men.

When the report of the accident reached the foot of the shaft, the assistant foreman, Ebenezer D. Williams and Gomer Williams, taking with them a number of men, started up the plane, but were assured by Morris and Weiss, whom they met near the foot, that the fire had been extinguished, but that they had better make a thorough examination to satisfy themselves.

When they were near the head of the plane, a second explosion took place, instantly killing Ebenezer D. Williams, assistant foreman; Gomer Williams, assistant foreman; Thomas Guest, pipeman; Thomas Price, tracklayer, and William S. Phillips, company miner, and fatally injuring Daniel Davies, pulleyman, who died on the 27th; also seriously injuring Daniel Davies, mine foreman; Evan Evans, bratticeman; William Frey, tracklayer, and Patrick McHale, doorman.

The ventilation in this part of the mine, under normal conditions is very good, amounting to 30,000 cubic feet of air per minute at the face, but the gangway had met a fault in the coal, which gave off a large increase of gas, so that the feeders could be ignited anywhere from the face of the gangway along the rib for sixty feet down the airway. From the evidence presented at the coroner's inquest, it appeared that when the laborer ignited the feeders at the corner of the cross-heading in the gangway, the flame ran across the face of the gangway in one direction, and in the other, it went through the cross-heading and down along the left rib of the airway, doing but little damage excepting to burn the two laborers and disarrange the ventilation which permitted the accumulation that caused the second explosion. There is no doubt but that there was a small feeder left burning alongside the rib of the airway, and when the gas came in contact with it, the second explosion occurred.

The coroner's jury in its verdict recommended that in mines generating explosive gases, no other light save that of a locked safety lamp should be used; and that flameless powder be used exclusively in blasting.

### Improvements by the Susquehanna Coal Company During 1901.

Colliery No. 5.—Shaft No. 2, Nanticoke, completed rock plane from Lee to Ross seams, total length 430 feet—outlet for second opening from head of No. 5 plane to connect with old workings in No. 4 tunnel—airshaft 100 feet deep from surface to head of No. 5 plane.

Shaft No. 4.—Extended rock foot on east side of shaft 125 feet, turned south and drove tunnel 220 feet and struck the coal; drove a tunnel on the north side 600 feet from the foot before reaching the seam, and an outlet for the second opening.

Shaft No. 5.—A plane 350 feet long to the top of the anticlinal on east side of shaft.

Slope No. 4.—Reopened the slope from No. 7 to No. 8 lifts.

Colliery No. 5.—Outside, Babcock & Wilcox boiler plant 500 horse power, and a large addition to the breaker to be used as a jig house.

Colliery No. 6.—Opened up Rider seam in No. 6 tunnel; open cut ten feet deep and 370 feet long for the purpose of getting around to the other pitch at No. 6 slope; No. 6 South shaft, a new traveling way from the head of No. 4 plane to the foot of shafts so that the men need not walk on the motor road. Outside, installed 1,000 horse power Babcock & Wilcox boilers, and large addition to the breaker.

Colliery No. 7.—No. 1 North shaft reopened Cooper seam from No. 17 tunnel, that had been abandoned for several years. No. 1 South shaft, reopened No. 10 slope from top to bottom to take the coal from southeasterly portion up No. 10 slope instead of up No. 5 slope; drove trail slope 500 feet long in Ross seam to develop basin; sunk a bore hole from the surface to the head of No. 10 slope eight inches in diameter for the slope rope. Outside, 500 horse power Babcock & Wilcox boilers; compressor plant to run air motor in No. 1 South shaft, and in the breaker, several Anthracite separators or spiral slate pickers.

In compliance with act No. 212, session of 1901, approved by the Governor the 29th day of May, 1901, this company has at each mine an emergency hospital for the care of injured employes, at least eight feet by twelve feet, and containing the following articles for immediate use: Four woolen blankets, two rubber blankets, eight quarts carron oil, two small rubber tourniquets; one large body rubber tourniquets, one bottle antiseptic lotion, one bottle aromatic spirits of ammonia, one dozen roller bandages, three triangular bandages, one roll adhesive plaster, ten wooden splints, one wash basin, one tin cup, two linen towels, one paper of No. 3 pins, one dozen safety pins No. 2½, one teaspoon, one scissors, two bars surgeon's soap, twelve oz. absorbent lint; twelve oz. absorbent cotton; a sufficient supply is kept at the office to supply the hospitals when necessary: also a record book, two kerosene lamps, two chairs, two benches, two stretchers and a table. The rooms are heated by steam and are very comfortable. Every mine that I have visited since this law went into



effect on November 29, 1901, is provided with an emergency hospital in accordance with the law; the supplies and furnishings vary with the different companies, but the above list is a fair average of the materials provided. The majority of the companies have employed physicians to hold schools of instruction at which the foremen, fire-bosses and driver bosses have been taught how to stop the flow of blood, dress burns, set a broken bone, and give what aid they can before the arrival of a physician.

#### Improvements Made by the Lehigh Valley Coal Company During the Year 1901.

Dorrance Colliery.—A rock plane has been started, to be driven on an angle of eighteen degrees, from the Baltimore to the five foot seam; during the year this plane has been driven a distance of 357 feet. The plane is eight feet high and eighteen feet wide. A rock tunnel driven through the measures 372 feet long from the Hillman to the Abbott seam. The volume of gas given off in the West Hillman plane workings was so large, that during the first part of the year this portion of the mine was stopped, until the intake airway was enlarged. When this was completed, the quantity of air at the face, was increased from 55,000 cubic feet per minute to 75,000 cubic feet, which has enabled them to resume mining in that seam, although they use locked safety lamps exclusively as a precaution. Outside, two horizontal tubular boilers, six feet in diameter and eighteen feet long were put in, replacing six old cylinder boilers.

#### Improvements Made by the Alden Coal Company During the Year 1901.

Shaft No. 1.—Tunnel over synclinal from mill to mill seam, 300 feet long seven feet by fourteen feet. Airshaft as a second opening from Forge to Cooper seam 100 feet deep, size eight feet by ten feet. A slope driven on a pitch of twenty degrees from the surface in the Mill seam 297 feet deep, size eight feet by twelve feet.

Shaft No. 2.—Rock airshaft from the Rosy to the Red Ash seam, to be used as a second opening fifty feet deep, seven feet by eight feet. Outside, five Anthracite separators, or spiral slate pickers and a fifty light acetylene gas plant.

#### Annual Examination of Mine Foremen.

The examination of applicants for certificates of qualification for mine foremen and assistant mine foremen was held in this district on the 4th, 5th and 6th of June, 1901, at the City Hall, Wilkes-Barre.

The board of examiners were, G. M. Williams, Mine Inspector; Edward Mackin, superintendent; Frank Mills and Thomas D. Lloyd,



miners. There were twenty-two applicants for mine foreman certificates, and the following named were recommended: John Wasley, Benjamin Davey, John McDonald, George Gallagher, Wm. Morgan, and Joseph Lippincott, of Wilkes-Barre; Robert Rutherford and Thomas Llewellyn, of Plymouth; John E. Thomas and William Morgan, of Glen Lyon; Harry O. Jones, Sugar Notch; E. D. Williams, Nanticoke; Rowland R. Jones, Westmoor; Arthur H. Lewis, Plains; and John Flynn, Chauncey.

The following named persons received certificates of qualification for assistant mine foreman: Theodore H. Richards, Levi P. Gibbon, William P. Thomas, Reese T. Jones, Thomas Williams, William H. Hughes, Louis Lloyd, John W. Davis, Morgan G. Thomas, Richard C. Thomas, George Roberts, David M. Jenkins, Abner Jonathan and James Gallagher, Wilkes-Barre; John T. Jenkins, Daniel Jones Edward B. Griffith, John H. Edwards, David J. Williams, Baldwin Edwards, William W. Morgan and Jacob Watkins, Edwardsdale; Hugh Evans, Daniel W. Reese, Thomas T. Jones, Orel E. Coursen, John H. Davies, Edward Gallagher and Robert Werder, Plymouth; Peter Sarpolis, Thomas Stoker, Daniel Igo, Edwin Jones, James Sullivan and John Blaylock, of Wanamie; David W. Griffith, John D. Evans, John Pratt and Fred. W. Smith, Nanticoke; Edward O'Donnell, Evan H. Evans and Richard Jones, Sugar Notch; Jehoiada Evans and David T. Richards, Ashley; David E. Hughes, Warrior Run; Daniel E. Hoffman, Glen Lyon and Robert F. Hart, Westmoreland.

### Mine Fires.

The only mine fire in this district that required a special effort to extinguish occurred at the Franklin colliery of the Lehigh Valley Coal Company. On the 11th of September a fire was discovered in the Baltimore slope, between No. 1 and No. 2 levels, near the bottom of the slope, about 10 P. M. In a very short time, the slope was a mass of flames and smoke, and the fire was fed by a large amount of old timber, used for cogs and collars. A vigorous fight was made, and after two weeks of hard work it was entirely extinguished. No accidents occurred to the men employed in this work. The cause of the fire has not been ascertained.

TABLE I.—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Fourth Anthracite District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>Lehigh and Wilkes-Barre Coal Co.</b>						
Hollenback No. 2.	Luzerne.	William J. Richards.	Wilkes-Barre.	Morgan R. Morgan, inside superintendent; W. F. Horring, outside superintendent; Charles F. Huber, mining engineer.	Wilkes-Barre.	C. R. R. of N. J.
Empire No. 4.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
No. 3 South Wilkes-Barre.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
No. 5 South Wilkes-Barre.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Stanton No. 1.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Maxwell No. 20.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
No. 9 Sugar Notch.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Lanes No. 11.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Nottingham No. 13.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Weymouth No. 14.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Wilkes-Barre No. 15.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Warname No. 18.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
Jersey Annex No. 8.	Luzerne.	William J. Richards.	Wilkes-Barre.	do.	Wilkes-Barre.	C. R. R. of N. J.
<b>Del. &amp; Hudson Canal Co.</b>						
Baltimore No. 2.	Luzerne.	C. C. Rose.	Scranton.	E. R. Pettibone, engineer of mines.	Scranton.	Del. & Hudson R. R.
Baltimore slope.	Luzerne.	C. C. Rose.	Scranton.	Samuel R. Morgan.	Scranton.	Del. & Hudson R. R.
Baltimore tunnel.	Luzerne.	C. C. Rose.	Scranton.	Samuel R. Morgan.	Wilkes-Barre.	Del. & Hudson R. R.
Corryingham No. 1.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Wilkes-Barre.	Del. & Hudson R. R.
Corryingham No. 2.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Plymouth.	Del. & Hudson R. R.
Boston.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Plymouth.	Del. & Hudson R. R.
Plymouth Mountain.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Plymouth.	Del. & Hudson R. R.
Plymouth No. 3.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Plymouth.	Del. & Hudson R. R.
Plymouth No. 4.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Plymouth.	Del. & Hudson R. R.
Plymouth No. 5.	Luzerne.	C. C. Rose.	Scranton.	Thomas Stoneham.	Plymouth.	Del. & Hudson R. R.
<b>Susquehanna Coal Co.</b>						
Shaft No. 1, George seam.	Luzerne.	Morris Williams.	Wilkes-Barre.	F. H. Kohlbraker, superintendent; John T. Thomas, assistant superintendent.	Nanticoke.	Penn'a Railroad.
Shaft No. 1, Forge seam.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Shaft No. 2.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Shaft No. 3.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Shaft No. 4.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Shaft No. 5.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Shaft No. 6.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Shaft No. 7.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Slope No. 4.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Slope No. 5.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.
Tunnel No. 6.	Luzerne.	Morris Williams.	Wilkes-Barre.	do.	Nanticoke.	Penn'a Railroad.

Kingston Coal Co.	Luzerne, Shaft No. 1, .....	G. M. Williams, .....	Kingston, .....	Morgan Rosser, .....	Kingston, .....	D., L. & W. R. R.
	Luzerne, Shaft No. 2, .....	G. M. Williams, .....	Kingston, .....	Gwilym Edwards, .....	Edwardsville, .....	D., L. & W. R. R.
	Luzerne, Shaft No. 3, .....	G. M. Williams, .....	Kingston, .....	Gwilym Edwards, .....	Edwardsville, .....	D., L. & W. R. R.
	Luzerne, Shaft No. 4, .....	G. M. Williams, .....	Kingston, .....	Morgan D. Rosser, .....	Kingston, .....	D., L. & W. R. R.
	Luzerne, Gaylord slope, .....	G. M. Williams, .....	Kingston, .....	Gwilym Edwards, .....	Edwardsville, .....	D., L. & W. R. R.
D. L. & W. R. R. Co.	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
East Woodward No. 1, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
West Woodward No. 1, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
Woodward No. 2, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
Avondale, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
Bliss, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
Espy tunnel, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
Auchincloss Nos. 1 and 2, .....	Luzerne, .....	E. E. Loomis, .....	Scranton, .....	Montrose Barnard, .....	Wilkes-Barre, .....	D., L. & W. R. R.
Lehigh Valley Coal Co.	Luzerne, .....	S. D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley R. R.
Dorrance, .....	Luzerne, .....	S. D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley R. R.
Franklin, .....	Luzerne, .....	S. D. Warriner, .....	Wilkes-Barre, .....	Eli T. Conner, .....	Wilkes-Barre, .....	Lehigh Valley R. R.
Red Ash Coal Co.	Luzerne, .....	Morgan B. Williams, .....	Wilkes-Barre, .....	Edward Smith, .....	Wilkes-Barre, .....	C. R. R. of N. J.
Red Ash No. 1, .....	Luzerne, .....	Morgan B. Williams, .....	Wilkes-Barre, .....	Edward Smith, .....	Wilkes-Barre, .....	C. R. R. of N. J.
Red Ash No. 2, .....	Luzerne, .....	Morgan B. Williams, .....	Wilkes-Barre, .....	Edward Smith, .....	Wilkes-Barre, .....	C. R. R. of N. J.
Parrish Coal Co.	Luzerne, .....	H. H. Ashley, .....	Plymouth, .....	Thomas R. Evans, .....	Plymouth, .....	C. R. R. of N. J.
Parrish, .....	Luzerne, .....	H. H. Ashley, .....	Plymouth, .....	Thomas R. Evans, .....	Plymouth, .....	C. R. R. of N. J.
Buttonwood, .....	Luzerne, .....	H. H. Ashley, .....	Plymouth, .....	Thomas R. Evans, .....	Plymouth, .....	C. R. R. of N. J.
Alden Coal Co.	Luzerne, .....	K. M. Smith, .....	Alden Station, .....	James M. Turner, .....	Alden Station, .....	C. R. R. of N. J.
Alden, .....	Luzerne, .....	K. M. Smith, .....	Alden Station, .....	James M. Turner, .....	Alden Station, .....	C. R. R. of N. J.
West End Coal Co.	Luzerne, .....	J. N. Rice, .....	Scranton, .....	David R. Roberts, .....	Shickshinny, .....	Penn'a Railroad.
West End, .....	Luzerne, .....	J. N. Rice, .....	Scranton, .....	David R. Roberts, .....	Shickshinny, .....	Penn'a Railroad.
Warrior Run Coal Co.	Luzerne, .....	James B. Davies, .....	Wilkes-Barre, .....	Michael Grimes, .....	Scranton, .....	Lehigh Valley R. R.
Warrior Run, .....	Luzerne, .....	James B. Davies, .....	Wilkes-Barre, .....	Michael Grimes, .....	Scranton, .....	Lehigh Valley R. R.
Crescent Coal Mining Co.	Luzerne, .....	Michael Grimes, .....	Scranton, .....	Michael Grimes, .....	Scranton, .....	C. R. R. of N. J.
Hadleigh, .....	Luzerne, .....	Michael Grimes, .....	Scranton, .....	Michael Grimes, .....	Scranton, .....	C. R. R. of N. J.
Plymouth Coal Co.	Luzerne, .....	James B. Davies, .....	Plymouth, .....	Michael Grimes, .....	Scranton, .....	D., L. & W. R. R.
Dodson, .....	Luzerne, .....	James B. Davies, .....	Plymouth, .....	Michael Grimes, .....	Scranton, .....	D., L. & W. R. R.
George F. Lee Coal Co.	Luzerne, .....	George F. Lee, .....	Wilkes-Barre, .....	M. H. Corgan, .....	Nanticoke, .....	D., L. & W. R. R.
Chauncey, .....	Luzerne, .....	George F. Lee, .....	Wilkes-Barre, .....	M. H. Corgan, .....	Nanticoke, .....	D., L. & W. R. R.
Sterling washery, .....	Luzerne, .....	James Butler, .....	Moosic, .....	M. H. Corgan, .....	Nanticoke, .....	D., L. & W. R. R.

TABLE II.—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Fourth Anthracite District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at collieries.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number of kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Lehigh and Wilkes-Barre Coal Co.												
Hollenback No. 2.	Luzerne.	198,038.14	10,570	30,449.00	238,757.14	187.4½	523	1	9	6,643	15,325	79
Empire No. 4.	Luzerne.	300,968.08	25,664	60,610.65	476,642.12	212	441	1	23	8,429	66,700	90
South Wilkes-Barre No. 5.	Luzerne.	202,634.08	13,690	6,871.00	293,195.08	135.4	859	4	9	6,593	5,455	91
Stanton No. 7.	Luzerne.	138,635.10	10,270	2,059.00	290,954.19	178.9	557	4	12	6,043	5,412	68
Sugar Notch No. 9.	Luzerne.	312,181.17	22,250	2,542.15	336,974.12	248.6½	681	4	11	8,869	44,118	75
Lance No. 11.	Luzerne.	553,015.13	34,224	7,174.69	594,414.02	217.9½	960	3	19	11,285	9,385	130
Nottingham No. 15.	Luzerne.	202,637.15	13,680	78.00	226,405.15	210.9	402	3	6	5,353	6,006	63
Reynolds No. 16.	Luzerne.	304,882.04	17,112	2,222.60	323,716.64	186.2	692	3	13	9,222	12,610	83
Manumit No. 8.	Luzerne.	329,719.06	23,962	7,742.60	361,414.06	198.6	731	2	17	8,338	40,594	75
Wesley Annex No. 30.	Luzerne.	51,886.06		16.60	81,835.05	179½	32		1			
Dirt banks.	Luzerne.				16.00							
Total.		2,764,049.40	171,123	119,164.60	3,054,336.00	194.4	6,185	21	131	70,783	216,785	757
Delaware and Hudson Canal Co.												
Baltimore shaft No. 2.	Luzerne.	130,310.06	23,277	1,866.60	155,452.66	83.1	361	1	4	2,643	287.2	38
Baltimore tunnel.	Luzerne.	143,541.12	26,957	2,904.40	167,462.12	169.1	237			3,964	412.2	66
Baltimore slope.	Luzerne.	166,954.14	24,554	3,682.10	195,171.64	175.1	420	1	5	4,951	3,570	33
Conyngham Nos. 1 and 2.	Luzerne.									1,956	25	7
Plymouth Mountain.	Luzerne.						65					
Boston.	Luzerne.	191,902.10	12,750		204,652.10	174.1	401	1	3	4,701	837.2	54
No. 2 Plymouth.	Luzerne.	155,890.12	26,234		182,124.12	153.2	568	2	6	6,790	2,150	74
No. 4 Plymouth.	Luzerne.	175,988.18	15,884	2,886.60	194,728.18	165	544		2	6,532	340	83
No. 5 Plymouth.	Luzerne.	314,304.13	24,450	4,617.15	348,372.68	192.1	335		2	4,997	746	40
Total.		1,278,893.05	153,166	15,916.65	1,447,915.10	179.9	3,894	6	27	44,247	12,743.2	456







TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number of kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Warrior Run Coal Co.	Luzerne	156,289.07	17,500	1,878	155,667.07	156.2	432	1	9	3,573	200	27
Hadleigh, Crescent Coal Mining Co.	Luzerne	.....	500	.....	500	6.1	210	.....	.....	79	50	22
Dodson, Plymouth Coal Co.	Luzerne	117,108.14	20,000	1,726.10	138,835.04	174.1	429	1	5	2,785	500	30
Chauncey, George F. Lee.	Luzerne	13,326.13	1,080	255.15	14,682.08	54.7	150	1	1	120	80	12
Sterling washery.	Luzerne	38,955.00	3,660	.....	42,605.00	174	22	.....	.....	.....	.....	.....
Grand total.		8,840,663.06	761,626.05	289,042.14	9,891,332.05	191.07	24,317	78	322	256,326	483,024.2	2,876

Recapitulation.												
Luzerne	2,764,049.00	171,123	119,161.09	15,916.05	3,051,326.09	154.4	6,185	21	171	70,785	26,705	757
Luzerne	1,278,893.05	133,106	21,449	1,447,915.10	1,447,915.10	172.9	3,834	6	27	44,287	12,743.2	436
Luzerne	1,138,108.15	149,654.05	18,288	1,309,222.00	1,309,222.00	236.6	4,064	10	72	52,471	92,700	420
Luzerne	916,657.00	19,000	12,417.01	934,546.00	934,546.00	194.3	2,300	9	15	23,737	6,215	335
Luzerne	892,063.10	89,788	61,688.12	951,258.11	951,258.11	138.6	2,483	5	30	21,317	32,385	292
Luzerne	394,871.04	34,479	2,442.10	461,098.16	461,098.16	175.1	1,028	3	7	16,632	9,385	152
Luzerne	238,465.03	9,376	20,576.10	258,382.13	258,382.13	121.5	1,355	3	1	16,632	9,385	156
Luzerne	613,257.08	48,060	17,000.17	737,498.18	737,498.18	151.5	2,317	9	21	20,698	57,290	193
Luzerne	634,268.01	86,230	289,042.14	9,891,322.05	9,891,322.05	191.7	24,317	78	322	256,326	483,024.2	2,876
Total.	8,840,663.06	761,626.05	289,042.14	9,891,322.05	9,891,322.05	191.7	24,317	78	322	256,326	483,024.2	2,876

\*Coal taken to No. 2 breaker.

\*Coal taken to No. 2 breaker.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.				Locomotives.				Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.	Electric.									
Lehigh and Wilkes-Barre Coal Co., .....	Luzerne, .....	182	8,117	53	9,294	17,321	10	1	705	26,724	26	26	18,940	8,251	.....	7	1
Delaware and Hudson Canal Co., .....	Luzerne, .....	161	4,800	15	3,150	7,950	3	.....	178	22,285	15	15	15,100	6,110	.....	.....	.....
Susquehanna Coal Co., .....	Luzerne, .....	73	2,555	56	7,964	10,519	14	3	63	12,040	12	12	12,500	6,560	.....	1	.....
Knox Coal Co., .....	Luzerne, .....	128	3,385	15	1,950	5,345	3	.....	39	4,055	8	8	3,600	1,250	.....	6	.....
Delaware, Lehigh and West, R. R. Co., .....	Luzerne, .....	18	540	42	6,370	7,110	4	5	68	8,577	9	9	9,416	8,186	.....	.....	.....
Lehigh Valley Coal Co., .....	Luzerne, .....	12	369	14	1,950	2,310	3	.....	27	2,306	3	3	3,100	1,940	.....	.....	.....
Red Ash Coal Co., .....	Luzerne, .....	13	765	.....	.....	765	2	.....	9	1,011	3	3	920	920	.....	.....	.....
Lehigh Valley Coal Co., .....	Luzerne, .....	13	603	21	1,650	2,250	.....	.....	21	4,100	2	2	1,800	1,500	.....	.....	.....
Parrish Coal Co., .....	Luzerne, .....	35	1,685	39	4,130	5,815	.....	.....	39	5,053	14	14	10,500	6,175	.....	.....	.....
Miscellaneous coal companies, .....	Luzerne, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	643	22,217	245	37,168	59,385	39	4	709	86,137	92	92	75,876	40,832	7	.....	30

TABLE III—Showing the number of each class of employees at each colliery in the Fourth Anthracite District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.										Grand total inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.	Total outside.						
Lehigh and Wilkes-Barre Coal Co.	Luzerne	15	54	1,629	1,266	434	311	796	4,415	19	51	196	788	22	693	1,679	6,185					
Hollenback No. 2.	Luzerne	1	4	53	53	99	1	40	173	1	6	12	116	1	52	189	361					
Empire No. 4.	Luzerne	1	3	88	89	28	8	49	217	1	4	12	19	1	24	30	227					
South Wilkes-Barre No. 3 and 5.	Luzerne	2	8	170	169	57	34	121	471	1	3	24	104	3	61	200	650					
Baltimore tunnel.	Luzerne	2	5	177	159	27	28	166	596	1	6	26	97	3	80	188	660					
Conyngham Nos. 1 and 2.	Luzerne	1	2	100	100	38	38	76	492	1	5	13	80	2	54	155	537					
Boston.	Luzerne	1	4	169	95	58	28	131	533	1	6	23	75	2	45	151	684					
Plymouth Mountain.	Luzerne	2	5	200	160	58	34	84	714	1	1	26	148	2	70	255	999					
Plymouth No. 2.	Luzerne	1	10	200	216	71	15	131	714	1	1	26	148	2	70	255	999					
Plymouth No. 3.	Luzerne	1	6	85	82	44	17	58	200	1	4	13	51	2	41	112	412					
Plymouth No. 4.	Luzerne	1	3	85	82	44	17	58	200	1	4	13	51	2	41	112	412					
Plymouth No. 5.	Luzerne	1	6	181	202	40	18	65	513	1	1	21	65	2	38	179	682					
Jersey Annex No. 8.	Luzerne	1	6	181	202	40	18	65	513	1	1	21	65	2	38	179	682					
Total.		15	54	1,629	1,266	434	311	796	4,415	19	51	196	788	22	693	1,679	6,185					
Delaware and Hudson Canal Co.	Luzerne	1	4	53	53	99	1	40	173	1	6	12	116	1	52	189	361					
Baltimore shaft No. 2.	Luzerne	1	3	88	89	28	8	49	217	1	4	12	19	1	24	30	227					
Baltimore tunnel.	Luzerne	2	8	170	169	57	34	121	471	1	3	24	104	3	61	200	650					
Conyngham Nos. 1 and 2.	Luzerne	1	2	100	100	38	38	76	492	1	5	13	80	2	54	155	537					
Boston.	Luzerne	1	4	169	95	58	28	131	533	1	6	23	75	2	45	151	684					
Plymouth Mountain.	Luzerne	2	5	200	160	58	34	84	714	1	1	26	148	2	70	255	999					
Plymouth No. 2.	Luzerne	1	10	200	216	71	15	131	714	1	1	26	148	2	70	255	999					
Plymouth No. 3.	Luzerne	1	6	85	82	44	17	58	200	1	4	13	51	2	41	112	412					
Plymouth No. 4.	Luzerne	1	3	85	82	44	17	58	200	1	4	13	51	2	41	112	412					
Plymouth No. 5.	Luzerne	1	6	181	202	40	18	65	513	1	1	21	65	2	38	179	682					
Total.		12	25	822	867	328	125	473	2,672	9	51	139	519	12	381	1,182	3,831					

Susquehanna Coal Co.																
Colliery No. 5, shaft No. 1.....	3	10	292	344	77	42	195	962	1	28	45	140	4	189	417	1,319
Colliery No. 5, shaft No. 2.....																
Colliery No. 5, shaft No. 3.....																
Colliery No. 5, slope No. 1.....																
Colliery No. 5, shaft No. 4.....	2	12	306	380	103	58	186	1,047	1	30	31	153	4	190	415	1,465
Colliery No. 6, shaft No. 1.....	3	8	310	329	104	5	151	911	1	28	25	145	4	176	379	1,280
Colliery No. 6, shaft No. 2.....																
Colliery No. 6, slope No. 1.....																
Colliery No. 6, slope No. 2.....																
Colliery No. 6, slope No. 3.....																
Colliery No. 6, slope No. 4.....																
Colliery No. 6, slope No. 5.....																
Colliery No. 6, slope No. 6.....																
Colliery No. 6, tunnel No. 6.....																
Total.....	8	39	878	1,044	281	105	561	2,859	3	86	101	438	12	574	1,214	4,061
Kingston Coal Co.																
Colliery No. 4, shaft No. 1.....	1	3	142	84	44	18	42	331								
Colliery No. 4, shaft No. 2.....	1	3	143	57	42	13	46	316	1	29	21	292	2	129	375	1,004
Colliery No. 2, shaft No. 1.....	2		141	92	37	23	41	356								
Colliery No. 2, shaft No. 3.....	1	2	134	80	38	32	30	317	2	15	17	180	2	136	315	1,148
Gayford.....	1		52	30	28	5	25	141	1	3	6	62	1	54	137	298
Total.....	6	8	612	343	209	91	184	1,457	4	41	44	444	5	349	847	2,390
DeL., Laek'a and West, R. R. Co.																
Woodward Nos. 1 and 2.....	2	1	258	276	90	42	191	841	1	5	21	137	3	115	282	1,126
Avonville.....	1	3	110	169	42	14	145	424	1	5	9	43	2	44	104	528
Richmond.....	1		47	47	1		47	52	1	7	13	114	1	24	35	87
Bigs.....	1	4	193	170	53	13	48	483	1				2	92	239	742
Total.....	6	14	565	529	185	70	434	1,803	4	19	50	324	8	275	680	2,483
Lethish Valley Coal Co.																
Dorrance.....	2	5	111	91	60	24	87	380	1	12	21	61	5	78	178	578
Franklin.....	1	2	113	79	41	16	75	328	1	13	10	24	3	91	142	470
Total.....	3	7	224	170	101	40	162	708	2	25	31	85	8	169	320	1,028
Red Ash Coal Co.																
Red Ash No. 1.....	1		47	53	26	6	29	162		1	5		1	34	41	213
Red Ash No. 2.....	1		70	69	21	7	25	193	1	7	5	87	2	59	161	334
Total.....	2		117	122	47	13	54	355	1	8	10	87	3	93	242	557
Parrish Coal Co.																
Parrish.....	1	1	157	113	58	33	75	442	1	6	21	80	5	77	190	632
Buttonwood.....	1	1	207	200	76	50	130	671	1	8	13	192	5	87	216	887
Total.....	2	12	364	313	134	83	215	1,113	2	14	34	182	10	164	406	1,519
Allen Coal Co.																
Allen shafts, Nos. 1 and 2.....	2	5	162	141	45	26	41	422	1	9	19	79	7	78	193	615
West End Coal Co.																
West End.....	2	1	81	86	30	4	37	241	1	41	18	61	4	123	248	489



TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.								Occupations of Persons Employed Outside.								Grand total inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.		
Warrior Run Coal Co.	Luzerne.....	1	3	108	100	18	20	44	294	1	5	12	54	4	62	138	432	
Warrior Run, .....	Luzerne.....	1	1	60	30	8	6	27	133	1	4	7	31	2	32	77	210	
Crescent Coal Mining Co.	Hadleigh, .....																	
Hadleigh, .....	Luzerne.....																	
Plymouth Coal Co.	Luzerne.....	1	3	80	95	34	15	60	288	1	7	13	66	4	50	141	429	
Dodson, .....	Luzerne.....																	
George F. Lee.	Luzerne.....	1	1	18	20	12	.....	15	67	1	3	4	50	1	24	83	150	
Chauncey, .....	Luzerne.....																	
Sterling washery, .....	Luzerne.....									1	.....	2	.....	4	15	22	22	

## Recapitulation.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Insile.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.		Total outside.
Lehigh and Wilkes-Barre, .....	Luzerne.....	15	54	1,639	1,266	434	311	796	4,515	10	51	196	785	22	603	1,670	6,185
Delaware and Hudson Canal Co., ..	Luzerne.....	12	25	822	867	328	125	473	2,652	9	51	130	589	12	381	1,152	3,834
Susquehanna Coal Co., .....	Luzerne.....	8	30	878	1,044	284	105	501	2,850	3	86	101	438	12	574	1,214	4,064
Kingsland Coal Co., .....	Luzerne.....	6	8	512	545	249	91	184	1,453	4	41	44	444	5	309	847	2,300
Del. Lack'a and West. R. R. Co., ..	Luzerne.....	6	14	565	523	185	70	431	1,863	4	19	50	321	8	273	681	2,543
Lehigh Valley Coal Co., .....	Luzerne.....	6	7	245	260	150	40	152	898	2	25	31	89	8	169	320	1,028
Red Ash Coal Co., .....	Luzerne.....	10	12	124	139	147	13	156	585	2	14	24	174	10	164	262	857
Parrish Coal Co., .....	Luzerne.....	8	13	264	213	134	83	295	1,313	3	14	24	182	10	369	496	1,519
Miscellaneous coal companies, ..	Luzerne.....	8	14	509	472	117	71	224	1,445	6	69	73	341	22	369	880	2,395
Washeries, .....	Luzerne.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	2	.....	4	15	22	22
Total and average, .....	.....	63	164	5,730	5,126	1,869	909	3,033	16,894	43	364	671	3,288	106	2,932	7,423	24,317



TABLE IV—List of fatal accidents that occurred in and about the mines of the Fourth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 3	John Redusky, .....	Austrian, ..	Miner, .....	31	M.	1	3	No. 2, D. & H., Plymouth, .....	Luzerne	Killed by an explosion of gas in old workings of roof fell upon him. He died the following day.
5	Michael Felan, .....	Slav, .....	Laborer, .....	25	S.	1	1	Woodward, .....	Luzerne	A piece of rock fell from the gob upon him. He died next day.
9	William Senior, ....	American, ..	Laborer, .....	20	M.	1	2	West End, .....	Luzerne	Slid down a chute and passed through a pair of rails.
17	James Sinker, .....	American, ..	Slate picker,...	14	S.	1	1	Maxwell breaker, .....	Luzerne	Killed by a fall of top rock as he was heading a car at the face of chamber.
20	John Hagerline, ....	American, ..	Laborer, .....	20	S.	1	1	Shaft No. 2, Nanticoke, .....	Luzerne	A bench of rider coal fell on him. He died the same day at the hospital.
21	John Voltus, .....	Pole, .....	Miner, .....	37	M.	1	1	Shaft No. 4, Kingston, .....	Luzerne	Killed by a fall of top coal as he was sounding the roof after firing a shot.
Feb. 1	Frank Ranchecki, ...	Lithuanian, ..	Miner, .....	35	M.	1	4	Shaft No. 4, Kingston, .....	Luzerne	Instantly killed by a fall of rock as he was passing the compressor.
4	John Ford, .....	English, ....	Miner, .....	45	M.	1	3	Shaft No. 2, Kingston, .....	Luzerne	Instantly killed by a fall of rock as he was passing the compressor.
13	Joseph Perfesky, ....	Pole, .....	Miner, .....	28	M.	1	6	Shaft No. 2, Kingston, .....	Luzerne	Instantly killed by a premature blast.
15	Thomas Pauko, ....	American, ..	Door boy, .....	15	S.	1	1	Slope No. 6, Glen Lyon, .....	Luzerne	Run over and killed by a trip of loaded cars.
19	William Newland, ...	English, ....	Miner, .....	37	M.	1	3	Alden No. 1 shaft, .....	Luzerne	Killed by a fall of top coal, as he was barring it down, in robbing pillars in the Ross seam.
March 2	John Harrish, .....	Pole, .....	Miner, .....	35	M.	1	2	Chauncey, .....	Luzerne	Killed by a fall of roof rock crushing the ganaway timbers down upon him.
5	Thomas J. Thomas, ...	Welsh, .....	Brattice man,...	64	M.	1	1	No. 6 tunnel, Glen Lyon, .....	Luzerne	Was putting up a set of timbers on a run when a trip of cars came down and struck a timber, the car struck him and he instantly killed.
5	D. L. Bonewitz, ....	American, ..	Engineer, .....	32	M.	1	1	Bliss, .....	Luzerne	In passing the compressor the end gave way and he was blown against the side of the engine house; died the same night.



TABLE IV.—Continued.

Date of accident.	Name of Person.	Nationality by birth.	(Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
5	Frank Gasdinski.....	Lithuanian.	Miner.	24	S.	.....	.....	Stanton, .....	Luzerne.	Fatally burned by an explosion of gas.
12	John Battle, .....	Irish, .....	Laborer, .....	61	M.	1	.....	Warrior Run, .....	Luzerne.	Died March 7, at the City Hospital.
15	John Simmers, .....	American, ..	Door boy, .....	14	S.	.....	.....	Alden No. 1, .....	Luzerne.	Run over by a trip of cars at the head of slope.
16	Frank Prill, .....	Pole, .....	Laborer, .....	61	M.	1	3	No. 7 breaker, Nanti- coke.	Luzerne.	Fell from the cage and was instantly killed.
26	John Metelavitch.....	Pole, .....	Miner, .....	36	M.	1	4	Wanamie No. 18, .....	Luzerne.	Stopped before a loaded car coming from No. 7 shaft and was run over; died in an old breast.
April 9	Stanley Frank, .....	Pole, .....	Miner, .....	28	M.	1	1	Wanamie No. 19, .....	Luzerne.	Was burned by lighting a body of gas in an old breast. Died April 6th.
22	John Keimel, .....	Lithuanian,	Laborer, .....	24	S.	.....	.....	Dodson, .....	Luzerne.	Severely injured by lighting a body of gas in an old breast. Died the next day.
May 4	Alexander Matlick,...	Pole, .....	Miner, .....	36	M.	1	4	No. 2 shaft, Susquehanna Coal Co.	Luzerne.	Struck by a trip of runaway cars on the rock slope.
8	Kiate Gorski, .....	Pole, .....	Laborer, .....	24	S.	.....	.....	Sugar Notch No. 9, .....	Luzerne.	Instantly killed by a fall of rock in the face of his chamber.
8	Jacob Gromatski, ...	Lithuanian,	Miner, .....	31	M.	1	1	Lance No. 11, .....	Luzerne.	Skull fractured. His head struck the top of a door frame as he was riding out on top of a car. Died May 18th.
10	Daniel Kennedy, ....	Irish, .....	Miner, .....	50	M.	1	5	Baltimore No. 2, D. & H.	Luzerne.	Stepped on a board and a nail pierced his foot, took jaw set in and he died the next day.
27	Thomas Fregard, ....	English, ....	Miner, .....	63	M.	1	5	Nottingham, .....	Luzerne.	Instantly killed by a blast exploding as he was lighting the match.
27	Phillip Sheridan, ....	Irish, .....	Driver, .....	35	M.	1	.....	No. 4 shaft, Kingston Coal Co.	Luzerne.	Instantly killed by a fall of top coal at the face of his chamber.
June 13	Peter Moravitch, ....	Lithuanian,	Miner, .....	28	S.	1	1	No. 1 shaft, Kingston Coal Co.	Luzerne.	Burned by an explosion of gas; died June 4th.
13	Martin Midin, .....	Lithuanian,	Laborer, .....	25	M.	1	.....	No. 1 shaft, Kingston Coal Co.	Luzerne.	Both were instantly killed by a fall of rock at the face of their chamber as they were replacing a set of timber.
20	Thomas S. Jones, ....	American, ..	Miner, .....	27	M.	1	.....	Nottingham, .....	Luzerne.	Instantly killed by a fall of coal that he was undermining.

July	9	Stanley Goodess, ....	Pole, .....	Laborer, .....	27	S. ....	Stanton, .....	Luzerne, .....	Burned by an explosion of gas; died in the city hospital the same night.
	16	J. H. Ellis, .....	Welsh, ....	Timber man, ..	40	M. 1	Woodward, .....	Luzerne, .....	Instantly killed by a fall of rider coal as he was setting timbers on the gangway.
	26	W. J. Lyons, .....	American, ..	Miner, .....	53	S. ....	No. 2 shaft, Alden, ....	Luzerne, .....	Killed by a fall of coal and clod as he was loading a car at the face of his chamber.
	26	Ralph Turner, .....	American, ..	Miner, .....	33	M. 1	No. 2 shaft, Alden, ....	Luzerne, .....	Killed by a fall of top coal as he was drilling a hole in the mining bench.
Aug.	3	Simon Patrick, .....	Pole, .....	Miner, .....	45	M. 1	Dorrance, .....	Luzerne, .....	Back was broken by a fall of coal in the face of his chamber.
	5	Joseph Zevarski, ....	Pole, .....	Miner, .....	30	S. ....	Dorrance, .....	Luzerne, .....	Killed by a trip of cars striking him as he was walking up the slope.
	6	Frank Lushuski, ....	Pole, .....	Miner, .....	33	M. 1	Parrish, .....	Luzerne, .....	Killed by a fall of rock as he was standing a prop in the face of his chamber.
	7	Michael Gurski, .....	German, ....	Miner, .....	29	M. 1	Bliss, .....	Luzerne, .....	Killed by a fall of top coal as he was loading a car in the face of his chamber.
	10	Frank Strong, .....	American, ..	Runner, .....	27	M. 1	West End Coal Co., .....	Luzerne, .....	Instantly killed by a fall of loose gob on the slope.
	14	Zachariah Henson, ....	English, ....	Laborer, ....	43	M. 1	No. 1 shaft No. 7, Nanticoke, .....	Luzerne, .....	Instantly killed by a fall of top rock on the gangway road.
	16	John Volcavage, ....	Pole, .....	Miner, .....	45	M. 1	Lance No. 11, .....	Luzerne, .....	Burned by an explosion of gas in his chamber. Died Aug. 23d.
	19	Augustus Thomas, ....	American, ..	Miner, .....	47	M. 1	Wanamie No. 13, .....	Luzerne, .....	Killed by a fall of roof rock as he was barring it down.
	22	Joseph L. Duggan, ...	American, ..	Driver, .....	17	S. ....	No. 1 S. shaft No. 7, Nanticoke, .....	Luzerne, .....	Caught in the stretcher chain and dragged by the mule as he was pulling cars off of the cage at foot of shaft. Died Aug. 24th.
	22	James Cunningham, ..	Irish, .....	Timber man, ...	42	M. 1	Franklin, .....	Luzerne, .....	Fatally sealed by the bursting of a steam pipe on the slope. Died Aug. 34th.
	30	Povel Yenzines, .....	Lithuanian, ..	Laborer, .....	19	S. ....	Sugar Notch No. 9, .....	Luzerne, .....	Suffocated by after-damp, following an explosion of fire damp in his chamber.
Sept.	9	George Allen, .....	American, ..	Driver, .....	31	M. 1	Gaylord, .....	Luzerne, .....	Killed by being squeezed between a mule loaded trip as he was coming out with a loaded trip.
	16	Edward Gallope, .....	English, ....	Door man, ....	70	M. ....	Buttonwood, .....	Luzerne, .....	Killed by a runaway car as he was trying to open his door.
	17	William D. Howells, ...	American, ..	Coupler, .....	17	S. ....	No. 1 S. shaft, Nanticoke, .....	Luzerne, .....	Was kicked on the abdomen by a mule. Died Sept. 28.
	17	William O. Thomas, ...	Welsh, .....	Schute boss, ...	24	S. ....	Stanton, .....	Luzerne, .....	As he was closing the windows in the screen room, he fell into the conveyor line, and was dragged by the scrapers.
	18	Andrew Brinoski, ....	Slav, .....	Miner, .....	43	M. 1	Boston, .....	Luzerne, .....	Killed by a fall of coal after removing the supporting props.
	20	Morgan T. Williams, ...	Welsh, ....	Laborer, .....	66	S. ....	Red Ash No. 2, .....	Luzerne, .....	Run over by a trip of loaded cars near the foot of slope. Died Sept. 22d.
Oct.	5	H. S. Hobbs, .....	English, ....	Miner, .....	48	M. 1	No. 5 Plymouth, D. & H., .....	Luzerne, .....	Instantly killed by a fall of roof rock. Died Oct. 5th.
	7	Andrew Kachisa, ....	Slav, .....	Laborer, .....	24	M. 1	Dorrance, .....	Luzerne, .....	Instantly killed by a fall of roof rock in face of counter.
	12	George Sheloski, ....	Pole, .....	Car loader, ....	19	S. ....	Nottingham, .....	Luzerne, .....	Squeezed between a gondola and the breaker timber.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
12	Thomas Maher, .....	Irish, .....	Laborer, .....	65	M	1	1	Lance No. 11, .....	Luzerne,	Thrown against the rib by a car upon which he was riding up the plane, and fatally injured. Died in the hospital Oct. 24th.
25	Ebenezer D. Williams, .....	American, .....	Asst. foreman, .....	50	M	1	1	Buttonwood, .....	Luzerne,	The first five were instantly killed and the last one fatally injured; died on Oct. 27th. A slight explosion of gas had taken place at about 1 o'clock P. M., in the Hillman plane extension, whereby which also killed some feeders. The miners supposed that they had extinguished the feeders before going out. As these men were approaching, which face a second explosion occurred, which killed them.
25	Gomer Williams, .....	Welsh, .....	Asst. foreman, .....	39	M	1	1	Buttonwood, .....	Luzerne,	Instantly killed by a premature blast as he was throwing in material for his miner to tamp a hole.
25	Thomas Guest, .....	American, .....	Pipeman, .....	35	M	1	3	Buttonwood, .....	Luzerne,	Fatally burned by an explosion of gas that was ignited by Wascavage in an abandoned chamber. Young killed Nov. 21 and Wascavage on Nov. 22.
25	Thomas J. Price, .....	Welsh, .....	Track layer, .....	32	M	1	1	Buttonwood, .....	Luzerne,	Was riding down the plane when the plane exploded and the top broke and the car ran away, throwing him off. Died Nov. 10th.
25	William S. Phillips, .....	Welsh, .....	Miner, .....	31	M	1	2	Buttonwood, .....	Luzerne,	In stepping from one bumper to another he slipped and fell under the cars. He was instantly killed.
25	Daniel Davis, .....	Welsh, .....	Fulley man, .....	38	M	1	4	Buttonwood, .....	Luzerne,	Killed by a fall of middle rock as he was harring down loose coal.
26	Napoleon Bednoosh, .....	Pole, .....	Laborer, .....	40	M	1	6	Woodward, .....	Luzerne,	
31	Gilbert Young, Jr., .....	English, .....	Driver, .....	16	S	1	1	Farrish, .....	Luzerne,	
31	Walter Wascavage, .....	Russian, .....	Laborer, .....	21	M	1	1	Farrish, .....	Luzerne,	
Nov. 4	Edwin Cantral, .....	English, .....	Laborer, .....	21	M	1	1	No. 2 Plymouth, D. & H., .....	Luzerne,	
4	Patrick Manley, .....	Irish, .....	Driver, .....	23	S	1	1	No. 2 Kingston, .....	Luzerne,	
5	John Drest, .....	Pole, .....	Miner, .....	50	M	1	3	Red Ash No. 2, .....	Luzerne,	

9	Charles Coney, .....	American, ..	Shoveler, .....	21	S. ....	Hollenback breaker, ....	Luzerne, ..	His skull was crushed by being caught in the shakers as he was making repairs. Fatally injured by a premature blast. Died Nov. 11th.
9	Joseph Miskel, .....	Pole, .....	Miner, .....	23	S. ....	Sugar Notch No. 9, .....	Luzerne, ..	Killed by a fall of rock at the face as he was shoveling coal into the chute.
13	Paul Wants, .....	Slav, .....	Laborer, .....	26	M. 1	Maxwell No. 20, .....	Luzerne, ..	Instantly killed by a fall of rock as he was loading a car at the face of the shaft.
15	Joseph Cosick, .....	Pole, .....	Laborer, .....	32	M. 1	Stanton No. 7, .....	Luzerne, ..	Killed by a fall of rock as he was clearing a cave-in.
16	Daniel Reilly, .....	American, ..	Mason's helper, 32	S. ....	.....	Franklin, .....	Luzerne, ..	Killed by falling down manway as he stepped back from some gas that he ignited in the cross-cut.
23	John McGrane, .....	American, ..	Miner, .....	49	M. 1	Sugar Notch No. 9, .....	Luzerne, ..	Fatally injured by being struck on the head by a block at the mill fan. Died in a few hours.
25	George Layou, .....	American, ..	Machinist, .....	30	M. 1	No. 7 colliery, Nanticoke,	Luzerne, ..	Fatally injured by a premature blast. Died Dec. 12th.
Doc.	Martin Mahosky, .....	Pole, .....	Miner, .....	64	M. 1	Lance No. 11, .....	Luzerne, ..	Crushed to death between timbers and screen.
23	Teofil Baker, .....	Pole, .....	Oiler, .....	20	S. ....	No. 6 breaker, Glen Lyon,	Luzerne, ..	Fatally injured by a rush of culm burying him in the culm bank. Died at the hospital on the next day.
26	John Mangan, .....	Irish, .....	Shoveler, .....	48	M. 1	Red Ash No. 1, .....	Luzerne, ..	Caught in the conveyors and crushed to death.
26	Andrew Coulter, .....	American, ..	Slate picker, .. 15	S. ....	.....	Conyngham breaker, ...	Luzerne, ..	

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Fourth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 1	Andrew Pisto, .....	Pole, .....	Laborer, .....	24	M.	Avondale, .....	Luzerne, ..	Injured in riding down the slope with bearings.
2	Severinus Kivier, .....	American, ..	Brakeman, ..	23	S.	No. 5 breaker, Nanticoke, ..	Luzerne, ..	Slipped on ice in front of locomotive and his feet were caught, badly injuring it.
3	Charles Joslewicz, .....	Pole, .....	Laborer, .....	34	M.	Sugar Notch No. 9, .....	Luzerne, ..	Hip dislocated; struck by a piece of coal.
4	Joseph Lonsdale, .....	English, ..	Laborer, .....	22	M.	No. 2 Plymouth, D. & H., ..	Luzerne, ..	Ankle broken by explosion of gas.
5	Thomas Rowlands, .....	Welsh, .....	Miner, .....	36	M.	No. 1 S. shaft, Nanticoke, ..	Luzerne, ..	Small bone in leg broken; platform broke and he slid down a breast.
6	Alfred Eshing, .....	American, ..	Patcher, .....	17	S.	South Wilkes-Barre, .....	Luzerne, ..	Leg fractured; mule fell on him.
7	George Tolson, .....	English, ..	Miner, .....	35	M.	South Wilkes-Barre, .....	Luzerne, ..	Leg fractured by fall of coal.
8	Samuel Darr, .....	Russian, ..	Laborer, .....	45	S.	No. 5 breaker, Nanticoke, ..	Luzerne, ..	Internally injured; caught between side of breaker and car-truck him.
9	George Hutchinson, ....	English, ...	Plane runner, ..	22	M.	No. 4 slope, Nanticoke, .....	Luzerne, ..	Severely injured by being squeezed between car and mule.
10	Joseph Task, .....	American, ..	Patcher, .....	15	S.	Hollenback, .....	Luzerne, ..	Arm dislocated by falling from a car.
11	Joseph Mascher, .....	American, ..	Car loader, .....	24	S.	Rutonwood breaker, .....	Luzerne, ..	Severely injured by a premature blast.
12	Andrew Hallis, .....	Pole, .....	Miner, .....	35	M.	Reynolds No. 16, .....	Luzerne, ..	Severely injured by a premature blast.
13	Michael Ferras, .....	Pole, .....	Laborer, .....	18	S.	Reynolds No. 16, .....	Luzerne, ..	Leg fractured; struck by a piece of coal.
14	Llewellyn Price, .....	Welsh, .....	Mine foreman, ..	43	M.	Franklin slope, .....	Luzerne, ..	Shall fractured by fall of coal.
15	Thomas Rattaba, .....	Pole, .....	Laborer, .....	35	S.	South Wilkes-Barre, .....	Luzerne, ..	Nose fractured; kicked by a mule.
16	David Watkins, .....	American, ..	Door boy, .....	16	S.	Woodward, .....	Luzerne, ..	Leg broken by coal from a car.
17	James Russell, .....	Irish, .....	Miner, .....	39	M.	Avondale, .....	Luzerne, ..	Injured on back and ankle by a fall of top.
18	James Palmer, .....	Irish, .....	Laborer, .....	31	M.	Maxwell, .....	Luzerne, ..	Ankle bruised by planks falling from a car.
19	Thomas J. Morgan, ....	Welsh, .....	Coupler, .....	15	S.	No. 1 S. shaft, Nanticoke, ....	Luzerne, ..	Ankle fractured by a fall of coal.
20	James Slinock, .....	Pole, .....	Miner, .....	20	M.	No. 2 Plymouth, D. & H., ..	Luzerne, ..	Shall fractured by a fall of coal.
21	John Smithwick, .....	Lithuanian, ..	Laborer, .....	27	M.	No. 6 shaft, Glen Lyon, .....	Luzerne, ..	Cut on leg by a piece of coal falling from side.
22	Jacob Komiske, .....	Pole, .....	Laborer, .....	42	M.	Chauncey, .....	Luzerne, ..	Leg fractured by a fall of coal.
23	Robert R. Williams, ..	Welsh, .....	Miner, .....	38	M.	No. 5 Wilkes-Barre, .....	Luzerne, ..	Leg fractured by falling under a car.
24	William Gahnzski, .....	Lithuanian, ..	Miner, .....	23	S.	Lance, No. 11, .....	Luzerne, ..	Burned on neck and back by gas.
25	Anthony Stutz, .....	Pole, .....	Miner, .....	39	M.	Warrior Run, .....	Luzerne, ..	Severely burned by gas in an old chamber.



23	Michael Conway,	Irish,	Miner,	46	M.	No. 4 shaft, Baltimore,	Luzerne,	Injured by fall of rock.
24	Frank Kosinski,	Pole,	Laborer,	27	M.	Avondale,	Luzerne,	Back badly injured; squeezed between car and prop.
24	Anthony Onila,	Lithuanian,	Miner,	30	M.	Nottingham,	Luzerne,	Burned by an explosion of gas.
24	Fred Lewis,	American,	Driver,	18	S.	No. 2, Baltimore,	Luzerne,	Arm and leg fractured by falling under a car.
26	Fred. Katozski,	Pole,	Laborer,	43	M.	Sugar Notch No. 9,	Luzerne,	Rib fractured by a fall of rock.
26	Joseph Koronzie,	Pole,	Miner,	40	S.	Woodward,	Luzerne,	Eye injured by a balist.
26	William Morris,	Lithuanian,	Miner,	40	S.	Warrior Run,	Luzerne,	Burned by an explosion of gas; ignited by their naked light.
28	Joseph Sedoski,	Little,	Laborer,	38	M.	No. 1, Kingston Coal Co.,	Luzerne,	Severely squeezed; car ran over him.
29	Medea William,	Pole,	Shaftham,	50	M.	Elissmith,	Luzerne,	Wounded in face by a fall of rock.
29	John Hawkins,	English,	Shaftham,	50	M.	Breaker No. 5, Nanticoke,	Luzerne,	Arm broken; playing about machinery.
4	Joseph Shepanski,	Pole,	State picker,	32	M.	Hollenback,	Luzerne,	Shoulder dislocated by a fall of coal.
4	John Frousser,	Pole,	Miner,	35	M.	Shaft No. 1, Kingston Coal Co.,	Luzerne,	Back had a leg fracture; both were struck by the rope while walkink on the gangway.
7	Theodore Sedosky,	Pole,	Miner,	35	M.	Shaft No. 1, Kingston Coal Co.,	Luzerne,	Toes injured; caught in patent slate picker while using his feet to push coal.
7	Vladan Sinko,	Pole,	Laborer,	26	S.	Lance No. 11 breaker,	Luzerne,	Burned by an explosion of gas.
9	William Wilkins,	Welsh,	Slate picker,	14	S.		Luzerne,	Crushed between cars.
12	John Saeskie,	Pole,	Miner,	50	M.	Sugar Notch No. 9,	Luzerne,	
13	Fred. Barnby,	German,	Driver,	18	S.	Shaft No. 1, G. seam, Nanticoke,	Luzerne,	
14	Samuel Morgan,	Welsh,	Miner,	45	M.	Red Ash No. 1,	Luzerne,	Back painfully injured by a fall of coal.
14	Stanley Katozski,	Pole,	Laborer,	47	M.	Nottingham,	Luzerne,	Injured by a fall of coal.
19	Mike Bahietzki,	Pole,	Miner,	47	M.	Shaft No. 6, Glen Lyon,	Luzerne,	Leg fractured by a fall of rock.
20	Peter Plavley,	Pole,	Miner,	27	M.	Lance No. 11,	Luzerne,	Arm broken by a premature blast.
25	Mike Belchowski,	Pole,	Laborer,	37	M.	Wardale,	Luzerne,	Severely injured by a premature blast.
25	John Castelli,	American,	Boor boy,	16	S.	Reynolds,	Luzerne,	Arm broken while trying to sprag a car.
26	David Gower,	Welsh,	Driver,	20	S.	No. 4, Kingston Coal Co.,	Luzerne,	Foot squeezed between cars, sprag a car.
27	John Glower,	Lithuanian,	Miner,	50	M.	South Wilkes-Barre,	Luzerne,	Severely burned by an explosion of gas.
1	Stanley Stencoon,	Lithuanian,	Laborer,	25	S.	South Wilkes-Barre,	Luzerne,	
1	Arthur Jones,	Welsh,	Track layer,	25	S.		Luzerne,	
2							Luzerne,	
3	Harry Vaposky,	American,	Driver,	20	S.	Stanton,	Luzerne,	Thigh fractured; caught between cars while riding on them.
3	Andrew Hussin,	Pole,	Miner,	28	M.	Slope No. 6, Glen Lyon,	Luzerne,	Foot bruised; caught under a car wheel.
4	John Dugozski,	Pole,	Driver,	19	S.	Shaft No. 2, Nanticoke,	Luzerne,	Leg broken by a car getting off the track.
5	George Fignick,	Slav,	Co. laborer,	45	M.	Tunnel No. 6, Glen Lyon,	Luzerne,	Toes crushed; fell under a car while walking beside his team.
6	Frank Williams,	Pole,	Miner,	29	M.	No. 1 N. shaft, Nanticoke,	Luzerne,	Caught by a trip of cars and badly bruised.
8	Frank Gallagher,	American,	Driver,	24	S.	Hollenback,	Luzerne,	Face and chest bruised by a fall of rock.
9	Stanley Machinski,	Pole,	Miner,	45	S.	S. shaft No. 6, Glen Lyon,	Luzerne,	Jaw injured and face cut; kicked by a car.
11	John Kelley,	American,	Foot man,	40	S.	Woodward,	Luzerne,	Arm broken by a premature blast.
11	Evan Hughes,	Welsh,	Track layer,	56	M.	Warrior Run surface,	Luzerne,	Severely injured by being crushed between car and cage.
12	Walter Albert,	American,	Runner,	23	M.	No. 6 tunnel, Glen Lyon,	Luzerne,	Severely injured; fell under car while unhitching mule.
13	Evan J. Moran,	Welsh,	Laborer,	42	M.	No. 2 shaft, Kingston,	Luzerne,	Finger cut off; coal fell from car.
14	Samuel J. Reese,	Welsh,	Miner,	43	M.	Nottingham,	Luzerne,	Struck by timber.
14	Anthony Wisinski,	Pole,	Miner,	35	M.	Avondale,	Luzerne,	Slightly burned by explosion of gas.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by Birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
15	Lukas Fabisz, .....	Possian, ..	Laborer, ..	30	M.	No. 6 S. shaft, Glen Lyon,...	Luzerne,	Left the tunnel by being caught between coal and gob.
18	Joseph Vanez, .....	Pole, .....	Miner, .....	32	M.	Nanticoke, .....	Luzerne,	Mable bruised while barring down coal.
18	Joseph Ambroski, .....	Pole, .....	Miner, .....	46	M.	Scraper, .....	Luzerne,	Wounded by an explosion of gas.
18	Ernst Szewski, .....	Pole, .....	Miner, .....	28	M.	No. 6 S. shaft, Glen Lyon, .....	Luzerne,	Two legs fractured; car jumped the track.
18	Peter Sacate, .....	Pole, .....	Miner, .....	24	M.	Nanticoke, .....	Luzerne,	Wounded by an explosion of gas.
18	Adam Paszop, .....	Pole, .....	Laborer, ..	24	M.	Nanticoke, .....	Luzerne,	Seriously injured by an explosion of gas.
19	Adam Bogal, .....	Welsh, .....	Miner, .....	50	M.	Wilkes-Barre, .....	Luzerne,	Leg fractured by a collar in standing timbers.
20	George P. Richards, .....	American, ..	Carpenter, ..	35	M.	Ladson breaker, .....	Luzerne,	Three ribs broken; caught on the shaker shaft.
21	Frank Nawak, .....	Pole, .....	Miner, .....	42	M.	No. 1 S. shaft, Nanticoke, .....	Luzerne,	Face and hands burned by igniting gas.
21	Eddie Miller, .....	Pole, .....	Laborer, ..	48	M.	No. 1 S. shaft, Nanticoke, .....	Luzerne,	Face and hands burned by igniting gas.
23	John Szewski, .....	Lithuanian, ..	Miner, .....	40	S.	Nanticoke, .....	Luzerne,	Impaled on wire and hands by striking a patch in gas.
24	Anthony Koscilski, .....	Pole, .....	Laborer, ..	33	M.	Lee, .....	Luzerne,	Mable broken by a fall of rock.
25	Thomas Nogosz, .....	German, .....	Laborer, ..	22	M.	No. 4, Plymouth, .....	Luzerne,	Knees crushed; caught between cars.
25	Zory Knoch, .....	American, ..	Driver, .....	19	S.	South Wilkes-Barre, .....	Luzerne,	Severely injured; caught between car and track.
26	John P. Thomas, .....	Welsh, .....	Miner, .....	36	S.	South Wilkes-Barre, .....	Luzerne,	Body bruised and cut on head while barring down coal.
26	Chris. Unger, .....	German, .....	Miner, .....	22	S.	Barre, .....	Luzerne,	Body bruised by igniting half a keg of powder.
27	George Seitz, .....	Pole, .....	Miner, .....	29	M.	Avondale, .....	Luzerne,	Face bruised by a premature blast.
28	Frank Marble, .....	Pole, .....	Miner, .....	32	M.	Avondale, .....	Luzerne,	Severely injured by a fall of loose coal.
28	John Grono, .....	Pole, .....	Laborer, ..	35	S.	Avondale, .....	Luzerne,	As they were standing on No. 5 Ross slope.
28	Thomas Nowicki, .....	Pole, .....	Laborer, ..	35	M.	Avondale, .....	Luzerne,	
28	Math. Cullahan, .....	Pole, .....	Laborer, ..	50	S.	Avondale, .....	Luzerne,	
29	John Callahan, .....	Irish, .....	Miner, .....	40	S.	Macwell, .....	Luzerne,	Impaled while barring coal down.
29	Joseph Koscioda, .....	Pole, .....	Miner, .....	35	M.	Leads, .....	Luzerne,	Wounded by igniting a small body of gas.
30	Thomas Cullahan, .....	Irish, .....	Miner, .....	32	S.	Plymouth No. 2, .....	Luzerne,	Wounded by igniting a small body of gas.
1	John Frith, .....	American, ..	Post boy, ..	15	S.	No. 1 S. shaft, Nanticoke, ..	Luzerne,	Wounded by igniting a small body of gas.
1	John Frith, .....	American, ..	Post boy, ..	15	S.	Lane, No. 6, .....	Luzerne,	Wounded by igniting a small body of gas.
1	Adam Matich, .....	Slav, .....	Laborer, ..	18	S.	Red Ash No. 1, .....	Luzerne,	Wounded by igniting a small body of gas.

April

1	Adam Lataski, .....	Pole, .....	Miner, .....	38	M	Red Ash No. 1, .....	Luzerne, .....	Foot badly bruised by a fall of top rock.
4	Rollie Bensotter, .....	American, .....	Pump runner, .....	40	M	No. 2 slope, Nanticoke, .....	Luzerne, .....	Leg broken by falling, in moving a pump.
4	George Trave, .....	German, .....	Breaker boss, .....	26	M	Littlewood breaker, .....	Luzerne, .....	Compound fracture of arm caught in spiked wheel.
4	Andrew Murphy, .....	Irish, .....	Breaker boss, .....	20	S	No. 2 shaft, Nanticoke, .....	Luzerne, .....	Arm broken; hammer bucket fell on him.
4	John Koman, .....	Pole, .....	Laborer, .....	24	S	No. 2 shaft, Nanticoke, .....	Luzerne, .....	Arm badly cut by falling on a piece of coal.
6	William Davis, .....	American, .....	Laborer, .....	37	M	Maxwell, .....	Luzerne, .....	Cut on head and shoulders by fall of coal.
6	Corneilus Boyle, .....	Irish, .....	Miner, .....	50	M	Baltimore No. 4 shaft, .....	Luzerne, .....	Cut on head by a fall of coal.
6	William Blockus, .....	Pole, .....	Praver, .....	18	S	No. 2 shaft, Nanticoke, .....	Luzerne, .....	Crushed between cars.
8	Samuel Fullard, .....	Irish, .....	Miner, .....	62	M	Conevham, .....	Luzerne, .....	Brained on the back by a fall of coal.
10	Joseph Nastorski, .....	Pole, .....	Miner, .....	22	M	No. 4 shaft, Kingston, .....	Luzerne, .....	Leg fractured by fall of coal.
10	John Jones, .....	American, .....	Timberman, .....	29	S	Red Ash No. 1, .....	Luzerne, .....	Saw coat on forehead; struck by an iron rail.
15	Louis Chu ki, .....	Pole, .....	Laborer, .....	37	M	Wanamie No. 18, .....	Luzerne, .....	Arm broken by a fall of rock.
18	Adam Yachsha, .....	Pole, .....	Laborer, .....	40	M	Wanamie ton, .....	Luzerne, .....	Injured by an explosion of gas.
18	Peter Leskeg, .....	Pole, .....	Runner, .....	29	S	No. 3, Plymouth, .....	Luzerne, .....	Internally injured by a jar; the engineer allowed the cage to come down too hard.
18	Arthur German, .....	American, .....	Slate picker, .....	15	S	Wanamie breaker, .....	Luzerne, .....	Throat crushed; caught between spur track and plank.
19	John Lucas, .....	American, .....	Laborer, .....	25	M	Warrior Run, .....	Luzerne, .....	Arms and legs crushed by a premature blast.
19	John Pirovski, .....	Pole, .....	Tending bars, .....	14	S	No. 5 breaker, Nanticoke, .....	Luzerne, .....	Arm broken by falling from a plank.
22	Leffe Wach, .....	Irish, .....	Laborer, .....	41	M	Stanton, .....	Luzerne, .....	Legs broken by a fall of rock.
23	Stanley Slovinski, .....	Pole, .....	Miner, .....	28	M	Borranoe, .....	Luzerne, .....	Leg broken by a fall of coal.
23	Thomas E. Davis, .....	Welsh, .....	Miner, .....	36	M	No. 3 shaft, Kingston, .....	Luzerne, .....	Two ribs broken by a fall of rock.
23	John Butta, .....	Slav, .....	Laborer, .....	29	M	No. 3 shaft, Kingston, .....	Luzerne, .....	Cut and bruised on head by cage striking him.
26	Edward Campbell, .....	American, .....	Laborer, .....	29	M	Maxwell, .....	Luzerne, .....	Caught between car and door frame.
26	Mike Lynch, .....	Irish, .....	Miner, .....	40	M	Baltimore shaft No. 2, .....	Luzerne, .....	Leg broken by a fall of coal.
26	Wilson Butler, .....	American, .....	Laborer, .....	28	S	West End, .....	Luzerne, .....	Leg crushed by a fall of rock, necessitating amputation.
2	Joseph Dushinski, .....	Pole, .....	Miner, .....	41	M	No. 2 shaft, Nanticoke, .....	Luzerne, .....	Hands and fingers badly cut by coal from rib.
7	Andrew Erwittch, .....	Slav, .....	Miner, .....	33	M	Shaft No. 3, Kingston, .....	Luzerne, .....	Arm and leg cut on face by a blast.
7	Mike Semlar, .....	Pole, .....	Laborer, .....	33	M	Maxwell, .....	Luzerne, .....	Ribs fractured by a premature blast.
8	Thomas W. Jones, .....	Welsh, .....	Miner, .....	32	M	South Wilkes-Barre, .....	Luzerne, .....	Caught by a runaway car and severely bruised.
9	Adam Deitz, .....	Pole, .....	Miner, .....	37	M	Woodward, .....	Luzerne, .....	Badly bruised by a fall of coal.
9	Joseph Burnett, .....	Pole, .....	Laborer, .....	28	S	Woodward, .....	Luzerne, .....	Badly bruised by a fall of coal.
17	Joe Shursky, .....	Pole, .....	Laborer, .....	22	S	South Wilkes-Barre, .....	Luzerne, .....	Arm fractured by a piece of coal bursting from the rib.
18	Adam Mayback, .....	Pole, .....	Breaker boss, .....	26	S	No. 5 breaker, Nanticoke, .....	Luzerne, .....	Head and shoulders hurt; struck by a broken belt.
20	John Angaw, .....	English, .....	Miner, .....	40	M	Empire No. 4, .....	Luzerne, .....	Caught by a rush of coal and cut on head.
20	Benjamin Cross, .....	Welsh, .....	Asst. foreman, .....	54	M	Wanamie No. 19, .....	Luzerne, .....	Burned by an explosion of gas.
21	John T. Badley, .....	English, .....	Priver, .....	18	S	Bliss surface, .....	Luzerne, .....	Legs injured; caught between culm cars.
21	Mike Sullivan, .....	Irish, .....	Mason, .....	65	M	No. 2 shaft, Nanticoke, .....	Luzerne, .....	Legs bruised; struck by plane rope.
23	Willie on Patcheck, .....	Pole, .....	Miner, .....	35	M	No. 6 tunnel, Glen Lyon, .....	Luzerne, .....	Cut on head by a piece of coal that he was having down.
23	Anthony Tamboer, .....	Pole, .....	Miner, .....	34	S	Bliss, .....	Luzerne, .....	Burned by an explosion of powder.
24	Frank Fry, .....	Pole, .....	Loader, .....	19	S	Maxwell surface, .....	Luzerne, .....	Wrist fractured by falling from a platform.





20	John Hunshee,	Slav,	Laborer,	40	S.	Nottingham,	Luzerne,	Injured by a premature blast.
24	George Massakee,	American,	Miner,	59	M.	Reynolds No. 16,	Luzerne,	Arm fractured; struck by rope.
25	Joseph Starron,	Austrian,	Coupler,	15	S.	No. 6 slope,	Luzerne,	Knee fractured by a mule.
27	Paul Slavitch,	Lithuanian,	Miner,	25	M.	Woodward,	Luzerne,	Face and hands burned by an explosion of gas.
29	Lewis Morgan,	American,	Door boy,	24	S.	Wanamie No. 18,	Luzerne,	Jaw fractured; kicked by a mule.
30	John Strapishski,	Pole,	Laborer,	49	M.	No. 6 tunnel,	Luzerne,	Wrist fractured by being caught in loose coal.
July	1 John Doleck,	Pole,	Miner,	39	S.	Sugar Notch No. 9,	Luzerne,	Thicks and back bruised; caught between car and platform.
1	Morris Flower,	Welsh,	Miner,	38	M.	South Wilkes-Barre,	Luzerne,	Arm fractured by a premature blast.
1	Mike Mahonski,	Pole,	Miner,	35	M.	South Wilkes-Barre,	Luzerne,	Shoulder dislocated while lifting a coupling to top of car.
2	Andrew Solitzki,	Slav,	Slate picker,	14	S.	No. 5 breaker,	Luzerne,	Leg broken; caught in conveyor line.
3	Thomas Horan,	Irish,	Miner,	44	S.	South Wilkes-Barre,	Luzerne,	Leg fractured by coal from a blast.
5	John Vivian,	English,	Driver,	19	S.	No. 1 N. shaft,	Luzerne,	Mule fell on him; broke his leg.
9	George Pascoe,	American,	Laborer,	23	S.	South Wilkes-Barre,	Luzerne,	Dislocated his knee cap while shoveling coal.
10	James E. Lewis,	Welsh,	Mine foreman,	40	M.	Woodward,	Luzerne,	Bruised on back by a fall of rock.
10	Rudolph Lewis,	German,	Carpenter,	40	M.	Nottingham No. 15,	Luzerne,	Spike ran into his foot.
12	Leo Pollock,	Lithuanian,	Miner,	43	M.	No. 2 shaft,	Luzerne,	Back hurt by a fall of slate.
13	Andrew Valkoskie,	Pole,	Miner,	48	M.	No. 7 breaker,	Luzerne,	Injured by a fall of coal.
16	John Brown,	Slav,	Laborer,	19	S.	No. 2 shaft,	Luzerne,	Struck by a piece of coal from the face.
22	Philip Blaney,	English,	Miner,	48	M.	Maxwell,	Luzerne,	Body bruised by falling from a platform in the shaft.
26	Michael Higgins,	Irish,	Laborer,	55	W.	No. 6, Glen Lyon,	Luzerne,	Injured while removing coupling from car.
26	Paul Pollas,	Lithuanian,	Miner,	44	M.	Nottingham No. 15,	Luzerne,	Face and neck cut by premature blast.
26	Charles Herr,	English,	Trackman,	46	M.	No. 2 shaft,	Luzerne,	Leg squeezed by being caught between cars.
29	George Mutchler,	Pole,	Laborer,	28	S.	Avondale,	Luzerne,	Cut on head by premature blast.
31	James Traher,	American,	Foot man,	19	S.	No. 2 shaft,	Luzerne,	Ankle and foot hurt; thrown under loaded car.
Aug.	1 William J. Jones,	American,	Pipeman,	23	S.	South Wilkes-Barre,	Luzerne,	Bone fractured in toe; struck it with an axe.
3	Phillip Dinko,	Pole,	Miner,	40	M.	Nottingham,	Luzerne,	Ankle bruised by a fall of slate.
3	Stanley Mills,	Pole,	Laborer,	25	S.	Stanton,	Luzerne,	Leg bruised; bumped between cars.
6	Thomas Matherich,	Lithuanian,	Miner,	42	M.	Lance No. 11,	Luzerne,	Knee fractured by a fall of rock.
7	Andrew Karsner,	German,	Laborer,	45	M.	No. 5 shaft,	Luzerne,	Knee cap split by jumping from cars.
8	Joseph Murphy,	American,	Door boy,	27	S.	Maxwell,	Luzerne,	Left leg broken and body bruised by a car.
9	John B. Katsmerick,	Pole,	Miner,	35	M.	No. 5 shaft,	Luzerne,	Cut on back by a piece of coal from a blast.
9	Frank Makofski,	Pole,	Runner,	18	S.	South shaft,	Luzerne,	Four fingers cut; caught by coal on top of car.
10	Frank Taylor,	Pole,	Loader,	29	S.	Hollenback breaker,	Luzerne,	Hip bruised; caught between gondola and breaker timber.
12	Andrew Burnot,	Lithuanian,	Laborer,	35	M.	Conyngham breaker,	Luzerne,	Hip and breaker post; caught between gondola and breaker.
13	James Mundy,	Irish,	Miner,	30	S.	Conyngham,	Luzerne,	HtHP injured by a fall of rock.
16	Joseph Sawath,	Hungarian,	Miner,	44	M.	Lance No. 11,	Luzerne,	Burned by an explosion of gas.
18	Frank Smouter,	German,	Fan engineer,	69	M.	Stanton No. 7,	Luzerne,	Caught in the fan and cut on body.



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
18	Agan Woods.	American.	Carpenter.	25	M.	Stanton No. 7.	Luzerne.	Right arm broken; fell from a scaffold.
18	John Yarnaw.	Sac.	Road cleaner.	38	M.	Nottingham No. 15.	Luzerne.	Right leg fractured by a fall while putting a car on track.
20	John Englishart.	German.	Miner.	20	M.	No. 1 S. shaft, Nanticoke.	Luzerne.	Right leg broken by a fall of slate.
20	Frank Wiedemski.	Polish.	Miner.	20	M.	Lanes No. 11.	Luzerne.	Leg broken by a fall of rock.
20	Frank L. Kozlowski.	German.	Miner.	28	M.	Ayresdale.	Luzerne.	Legs broken by a fall of bony.
21	John Kosinski.	Lithuanian.	Miner.	43	M.	South Wilkes-Barre.	Luzerne.	Cut on head and hands by a premature blast.
22	William Tulejski.	Pole.	Laborer.	26	S.	Ballimore tunnel.	Luzerne.	Skull fractured by a fall of top coal.
22	John Ribolsa.	German.	Miner.	45	M.	South Wilkes-Barre.	Luzerne.	Fractured on face and hands by explosion of gas.
22	Tommy Hochreiter.	German.	Timber cutter.	55	M.	South Wilkes-Barre.	Luzerne.	Shoulder and arm bruised; struck by props.
22	William Collett.	American.	Miner.	43	M.	South Wilkes-Barre.	Luzerne.	Cut and bruised on arm by fall of top coal.
22	Joseph Muryak.	Pole.	Laborer.	27	M.	No. 6 slope, Glen Lyon.	Luzerne.	Leg broken by a fall of rock.
24	Michael J. G. Jurek.	Irish.	Foot man.	44	M.	No. 5 shaft, Plymouth.	Luzerne.	Arm broken and skull fractured by shaft
26	Thomas Quinn.	Irish.	Miner.	32	S.	South Wilkes-Barre.	Luzerne.	Leg fractured by a fall of coal.
26	Joseph Ferens.	Pole.	Miner.	25	M.	Warrior Run.	Luzerne.	Cut and bruised on arm and back by fall
26	Noah Nodawyski.	Pole.	Laborer.	35	M.	Warrior Run.	Luzerne.	Fractured on hands and face by an ex-
28	Thomas Davis.	Welsh.	Miner.	38	M.	Hollenback.	Luzerne.	Right leg fractured by a fall of coal.
29	August Stratachan.	German.	Laborer.	35	M.	South Wilkes-Barre.	Luzerne.	Leg fractured by a fall of coal.
30	Charles Shapirohage.	Pole.	Miner.	23	S.	Sugar Notch No. 9.	Luzerne.	Wounded by an explosion of gas.
30	Levas Kowatzke.	Pole.	Driver.	16	S.	No. 5 breaker, Nanticoke.	Luzerne.	Leg squeezed by ash cars at breaker.
31	Paul Redmeyer.	German.	Miner.	45	S.	No. 6 shaft, Glen Lyon.	Luzerne.	Wounded by an explosion of gas.
31	Andrew Bazz.	Pole.	Rockman.	35	S.	Nottingham No. 15.	Luzerne.	Right leg and shoulder hurt by fall of slate.
31	Thomas N. Jones.	Welsh.	Miner.	51	M.	Hollenback.	Luzerne.	Injured by a fall of bony coal.
3	Joseph Collins.	Lithuanian.	Laborer.	33	S.	Hollenback.	Luzerne.	Cut on head and shoulder by a fall of coal.
7	William Redfiew.	American.	Miner.	52	S.	Nottingham.	Luzerne.	Skull fractured; kicked by a mule.
	Walter Rull.	English.	Driver.	16	S.	Lee.	Luzerne.	

Sept.

10	John Mahady	American	Patcher	18	S.	Maxwell	Luzerne	Leg broken by a car
10	Frank Johnpoley	Lithuanian	Laborer	20	S.	Wanamie No. 18	Luzerne	Back injured by falling into an empty car, and leg broken by being dragged in smelter line
11	William Streckroat	American	Slate picker	14	S.	No. 5 breaker, Nanticoke	Luzerne	Leg hurt by a fall of coal
12	Andrew Overchok	Pole	Miner	40	M.	Reynolds No. 16	Luzerne	Foot hurt; piece of rock fell from between timbers
12	Frank Kuchinski	Pole	Laborer	27	S.	No. 2 shaft, Nanticoke	Luzerne	Leg fractured by a fall of coal
12	John Barragon	Pole	Laborer	49	M.	Maxwell	Luzerne	Arm broken by a fall of coal
12	Irish Keatinge	American	Miner	49	M.	No. 2 shaft, Nanticoke	Luzerne	Leg broken by being caught in a car brake
13	Wyndham Evans	American	Door boy	14	S.	No. 4 slope, Nanticoke	Luzerne	Three ribs broken by falling from a blank
14	Arthur Price	Welsh	Timber man	46	M.	Dodson	Luzerne	A pipe rolled on his leg, and broke it. Burned by an explosion of gas
14	William Morgans	Welsh	Laborer	60	M.	Wanamie No. 18	Luzerne	Two fingers mashed by a fall of coal
16	William Dwaniskie	Pole	Miner	49	S.	Parrish	Luzerne	Hip dislocated by a fall of rock
17	Ulrich Coshen	Pole	Laborer	28	M.	Maxwell	Luzerne	Hips bruised by a fall of rock
18	Joseph Petroskie	Hungarian	Laborer	22	M.	Red Ash No. 2	Luzerne	Leg bruised by a fall of coal
19	Harry Mills	American	Miner	24	M.	No. 2 shaft, Alden	Luzerne	Cut and bruised on head by a fall of coal
20	Frank Tompkins	American	Miner	32	M.	Hollenback	Luzerne	Burned by gas
21	Donallick Devers	Irish	Miner	32	M.	South Wilkes-Barre	Luzerne	Burned on face by gas
21	James McQuinn	Irish	Miner	26	M.	South Wilkes-Barre	Luzerne	Injured; caught between car and door
22	Charles McDonald	Welsh	Laborer	21	S.	South Wilkes-Barre	Luzerne	Caught by reversing link of shaft engine and his leg was broken
23	John Jongsomski	Pole	Miner	35	M.	South Wilkes-Barre	Luzerne	Burned about hands and face by explosion of gas
24	Michael Gansham	American	Door boy	20	S.	Maxwell	Luzerne	Leg broken by a fall of coal
25	Edward Maguire	American	Bell boy	15	S.	No. 2 Plymouth	Luzerne	Back injured by a fall of rock
26	John Kobak	Pole	Miner	35	M.	Wanamie No. 18	Luzerne	Body bruised; caught between mule and car
27	Frank Lavanda	Pole	Laborer	37	M.	No. 1 shaft, Nanticoke	Luzerne	Knee squeezed between cars
28	John Jones	Welsh	Patcher	16	S.	Hollenback	Luzerne	Arm broken; a collar fell on it as he was timbering
29	William Poshick	Irish	Miner	30	S.	No. 4 shaft, Kingston	Luzerne	Leg mashed by a car running over it necessitating amputation
30	Thomas Nolan	Irish	Driver	18	S.	Woodward	Luzerne	Leg broken by a fall of coal
31	John Pascoe	American	Footman	25	S.	South Wilkes-Barre, D. & H.	Luzerne	Shoulder dislocated by a fall of rock
32	J. A. Walker	English	Miner	40	M.	Gaylord	Luzerne	Blinded by a fall of rock
33	John Morgans	Welsh	Driver	23	M.	No. 3 Plymouth, D. & H.	Luzerne	Burned by gas struck by a prop
34	Michael Androwkites	Pole	Laborer	26	S.	Maxwell	Luzerne	Both were injured by a fall of rock in the tunnel
35	Carl Surosky	Lithuanian	Miner	25	M.	Woodward	Luzerne	Burned on hands and face by an explosion of gas
36	Frank Abemikas	Lithuanian	Miner	27	M.	Parrish	Luzerne	Injured by premature blast
37	James Asken	American	Miner	54	S.	Conyngham	Luzerne	Cut on head by a premature blast
38	George Hanks	American	Door boy	15	S.	Sugar Notch No. 9	Luzerne	Finger mashed between a rail and rock
39	James Kane	Irish	Rock miner	35	S.	Sugar Notch No. 9	Luzerne	
40	Henry Dickson	American	Rock miner	28	S.	Dodson	Luzerne	
41	Charles Bokowski	Pole	Miner	38	M.	Nottingham No. 15	Luzerne	
42	Anthony Smith	Lithuanian	Miner	32	M.	Sugar Notch No. 9	Luzerne	
43	Martin Gzaniski	Lithuanian	Laborer	31	M.	Woodward	Luzerne	
44	Paul Misicki	Lithuanian	Laborer	28	M.	No. 6 tunnel, Glen Lyon	Luzerne	
45	Anthony Briskie	Pole	Team driver	18	S.		Luzerne	

Oct.

TABLE V—Continued.

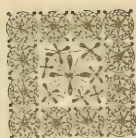
Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
15	John Miesskie, .....	Pole, .....	Laborer, .....	47	M.	No. 1 N. Shaft, Nanticoke, ..	Luzerne, ..	Leg broken; run over by a car.
17	Joseph Gelko, .....	American, ..	Driver, .....	16	S.	No. 4 Plymouth, D. & H., ..	Luzerne, ..	Thumb crushed between stretcher and car.
17	John Benson, .....	Irish, .....	Driver, .....	24	M.	No. 1 S. shaft, Nanticoke, ..	Luzerne, ..	Arm broken; squeezed between car and rail.
18	Mathew Cochran, .....	Irish, .....	Miner, .....	47	M.	Sugar Notch No. 9, .....	Luzerne, ..	Arm broken; caught between car and rail.
21	Mike Bernick, .....	Pole, .....	Miner, .....	48	M.	No. 1 N. shaft, Nanticoke, ..	Luzerne, ..	Leg broken; caught between car and rail.
21	John Cossack, .....	Pole, .....	Laborer, .....	30	M.	No. 4 Kingston Coal Co., ..	Luzerne, ..	Cut on head and back by a fall of coal.
22	Peter Androvitch, .....	Pole, .....	Miner, .....	25	M.	Stanton No. 7, .....	Luzerne, ..	Leg broken by a fall of coal.
23	Anthony Wilkes, .....	Pole, .....	Laborer, .....	30	M.	Wanamie No. 18, .....	Luzerne, ..	Leg broken by a fall of coal.
24	John Borik, .....	Hungarian, ..	Laborer, .....	32	M.	No. 2 shaft, Nanticoke, ..	Luzerne, ..	Foot cut by a blow from an axe.
24	Frank Tusowowski, .....	Pole, .....	Miner, .....	39	S.	Woodward, .....	Luzerne, ..	Leg broken by a fall of coal.
25	Frank Rudolski, .....	German, .....	Miner, .....	49	M.	No. 2 shaft, Alden, .....	Luzerne, ..	Injured by a fall of coal.
25	Peter Javies, .....	Pole, .....	Laborer, .....	32	M.	Buttonwood, .....	Luzerne, ..	
26	Michael J. Smith, .....	Pole, .....	Laborer, .....	37	M.	Buttonwood, .....	Luzerne, ..	
26	Daniel W. Davies, .....	Welsh, .....	Track layer, ..	37	M.	Buttonwood, .....	Luzerne, ..	Burned on face and hands by an explosion of gas.
25	Evan Evans, .....	Welsh, .....	Track layer, ..	41	S.	Buttonwood, .....	Luzerne, ..	
25	Patrick McHale, .....	Irish, .....	Door man, .....	42	S.	Buttonwood, .....	Luzerne, ..	
26	James Knecht, .....	American, ..	Miner, .....	44	M.	No. 5 Plymouth, D. & H., ..	Luzerne, ..	Back and arm bruised by a fall of slate.
26	Paul Bieski, .....	Pole, .....	Driver, .....	55	S.	No. 1 S. shaft, Nanticoke, ..	Luzerne, ..	Arm broken between car brake and prop.
30	John Brislin, .....	American, ..	Miner, .....	18	S.	No. 2 Plymouth, D. & H., ..	Luzerne, ..	Ankle dislocated; foot caught under rail.
31	Michael Terofski, .....	Russian, .....	Miner, .....	34	M.	Parrish, .....	Luzerne, ..	Burned by an explosion of gas.
31	Samuel Caley, .....	English, .....	Miner, .....	33	M.	Wanamie No. 18, .....	Luzerne, ..	Jaw fractured by falling from a car.
2	Michael Cullen, .....	American, ..	Runner, .....	18	S.	Horranee, .....	Luzerne, ..	Leg broken by a fall of roof.
4	David G. Thomas, .....	American, ..	Patcher, .....	17	S.	South Wilkes-Barre, .....	Luzerne, ..	Head badly bruised by a car jumping the track.
6	William Chalker, .....	English, .....	Miner, .....	40	M.	Wanamie No. 18, .....	Luzerne, ..	Hip dislocated while haring down coal.
8	Evan Lewis, .....	American, ..	Lumber, .....	29	S.	Dodson, .....	Luzerne, ..	Leg broken by a car jumping the track.
12	Adam Borscavage, .....	Lithuanian, ..	Laborer, .....	26	M.	Luzerne No. 9, .....	Luzerne, ..	Burned by explosion of gas.
12	Neal Conway, .....	Irish, .....	Miner, .....	38	M.	Sugar Notch No. 9, .....	Luzerne, ..	Burned by explosion of gas.
12	Joseph Smith, .....	Pole, .....	Laborer, .....	21	S.	Sugar Notch No. 9, .....	Luzerne, ..	Burned by explosion of gas.
12	John H. Thomas, .....	American, ..	Door boy, .....	14	S.	Stanton No. 7, .....	Luzerne, ..	Leg broken; caught between bumpers of cars.

Nov.

	Stanley Pospay,	Pole,	Laborer,	S.	Wanamie No. 13,	Luzerne,	Burned on hands and face by an explosion of powder.
14	John Keizer,	American,	Miner,	25	Wanamie No. 13,	Luzerne,	Leg broken by a fall of rock.
15	Albert Jabota,	Pole,	Miner,	41	S. Wilkes-Barre,	Luzerne,	Leg broken by fall of rock.
16	Zory Klomies,	American,	Miner,	46	S. Wilkes-Barre,	Luzerne,	Chest bruised; kicked by a mule.
17	Mike Brenudin,	Pole,	Miner,	38	No. 6 tunnel, Glen Lyon,	Luzerne,	Two fingers cut off by a fall of rock.
21	John Norman,	American,	Bel boy,	16	Warrior Run,	Luzerne,	Arm broken by falling at the foot of the slope.
27	John Wanchea,	Pole,	Laborer,	28	Lance No. 11,	Luzerne,	Burned by an explosion of gas.
29	James Sherrish,	Irish,	Door boy,	24	Boston,	Luzerne,	Leg broken by falling.
3	Arthur Nabholz,	German,	Laborer,	22	No. 7 breaker, Nanticoke,	Luzerne,	Flusser crushed by a lever in lifting a car.
4	Joseph Croon,	American,	Brk. foreman,	50	No. 7 breaker, Nanticoke,	Luzerne,	Side hurt by falling upon a screen.
4	Edward Grady,	Irish,	Miner,	25	S. Maxwell,	Luzerne,	Burned by an explosion of gas.
7	Anthony Yavana,	Austrian,	Laborer,	26	Avondale,	Luzerne,	Burned by an explosion of gas.
7	Daniel Murray,	American,	State picker,	17	S. Reynolds,	Luzerne,	Leg broken by a barrel of oil striking it.
9	Thomas R. Williams,	Welsh,	Mine foreman,	57	No. 4 Stearns, Susquehanna Coal Co.	Luzerne,	Leg fractured by a fall of coal.
10	Stanley Swartz,	Pole,	Driver,	17	S. Dorrance,	Luzerne,	Leg broken; struck by rope on slope.
11	Harry Finley,	American,	Foot man,	25	S. Maxwell,	Luzerne,	Arm and leg broken; struck by a piece of pile.
11	Morgan Beynon,	Welsh,	Miner,	41	No. 1 N. shaft, Nanticoke,	Luzerne,	Injured by a fall of roof.
12	William Stavinski,	Pole,	Laborer,	20	Sugar Notch No. 3,	Luzerne,	Leg broken; struck by piece of coal.
12	John Connolly,	American,	Laborer,	54	S. Jersey annex No. 8,	Luzerne,	Arm crushed by oak wheels.
12	Con. McTigue,	American,	Laborer,	34	S. Dighton,	Luzerne,	Leg broken; boards slid on him.
12	Anthony Treasie,	Bohemian,	Miner,	34	Doston,	Luzerne,	Ribs broken; caught between car and prop.
16	Nick Pascoe,	American,	Driver,	20	S. South Wilkes-Barre,	Luzerne,	Leg fractured; caught between car and plank.
18	Edwin E. Pierce,	American,	Door boy,	15	No. 5 Plymouth, D. & H.,	Luzerne,	Kicked on the jaw by a mule.
18	John A. Jenkins,	American,	Driver,	29	S. Woodward,	Luzerne,	Nose broken; kicked by a mule.
26	Steve Delma,	Russian,	Shoveler,	18	S. Red Ash No. 1,	Luzerne,	Burned by hot culm.
27	Peter N. Zitonnavage,	Lithuanian,	Miner,	28	No. 6 shaft, Glen Lyon,	Luzerne,	Leg broken by a prop falling on him.
28	Thomas Husband,	Welsh,	Mason,	57	No. 5 Plymouth, D. & H.,	Luzerne,	Leg broken; caught between cars.
30	Louis Brink,	American,	Teamster,	19	No. 6 shaft, Glen Lyon,	Luzerne,	Arm broken; caught between car and prop.

Dec.





# FIFTH ANTHRACITE DISTRICT.

LUZERNE AND CARBON COUNTIES.

Hazleton, Pa., February 21, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: I have the honor to submit herewith my sixth annual report as Inspector of Mines for the Fifth Anthracite District for the year ending December 31, 1901.

The total quantity of coal produced in this district was 6,374,939 tons, which compared with the previous year was an increase of 204,155 tons. It may be said, that with one exception, it was the largest production for any one year in the history of the district, and had it not been for the heavy rains, which flooded the collieries of the district during the months of August and December, the production would have been very much greater. Operations were suspended for several weeks; in fact, some collieries have not yet recovered.

The total shipments, including local sales, were 5,656,913 tons. Sixteen thousand one hundred and eight persons were employed on an average of 223 days, and 1,012,879 pounds of dynamite and 2,016,150 pounds of soda powder were used in the mines and on the stripping operations.

The total number of accidents was 149, of which sixty were fatal and eighty-nine non-fatal, leaving thirty-six wives widows and seventy-five children orphans.

I am pleased to state that the operators throughout this district have all complied with the act of Assembly No. 212 by constructing and equipping medical rooms for the purpose of caring for those injured in the mines.

This report contains in addition to the usual tables, a table showing the various nationalities of men employed and the number at each operation, also a table showing the methods of ventilation, revolution and diameter of fans and the quantity of air in circulation, as reported to this Department for the month of November, together with a brief description of important improvements made at a number of the collieries of the district during the year.

In conclusion, I would state that with two exceptions, the operations throughout the district, prior to the flood of December 14, 1901, were in first class condition, that is as to their safety and sanitary condition.

Very respectfully,

W. H. DAVIES,  
Inspector of Mines.

### Production of Coal During the Year 1901.

	Tons.
A. Pardee & Co., .....	416,293.03
Coxe Brothers & Co., Incorporated, .....	1,079,229.03
Lehigh Coal and Navigation Company, .....	931,359.17
G. B. Markle & Co., .....	1,062,841.08
The Lehigh Valley Coal Company, .....	982,365.05
Calvin Pardee & Co., .....	498,328.07
Estate of A. S. Van Wickle, .....	557,992.00
Upper Lehigh Coal Company, .....	256,596.14
C. M. Dodson & Co., .....	206,667.00
John S. Wentz & Co., .....e.....	149,204.00
M. S. Kemmerer & Co., .....	100,917.07
Audenried Coal Company, .....	78,170.19
Lehigh and Wilkes-Barre Coal Company, .....	38,000.00
Miscellaneous operations, .....	16,964.00
Total, .....	6,374,939.03

### The Total Production was Made up as Follows.

Shipped to market by railroad, .....	5,529,152.04
Sold at mines to local trade, .....	127,761.00
Consumed to generate steam and heat, .....	718,025.19
Total, .....	6,374,939.03

## Number of Fatal Accidents and Tons of Coal Mined per Life Lost.

Names of Operators.	Number of lives lost.	
	Number of lives lost.	Tons of coal mined per life lost.
A. Pardee & Co., .....	10	41,693
Coxe Bros. & Co., Inc., .....	7	154,175
Lehigh Coal and Navigation Co., .....	5	186,271
G. B. Markle & Co., .....	9	118,093
Lehigh Valley Coal Co., .....	15	65,491
Estate of A. S. Van Wickle, .....	5	111,598
Calvin Pardee & Co., .....	2	249,164
Upper Lehigh Coal Co., .....	2	128,298
C. M. Dodson & Co., .....	5	41,335
Total and average, .....	60	106,248

## Number of Non-Fatal Accidents and Tons of Coal Mined per Person Injured.

Names of Operators.	Number of persons injured.	
	Number of persons injured.	Tons of coal mined per person injured.
A. Pardee & Co., .....	4	104,073
Coxe Brothers & Co., Inc., .....	17	63,484
Lehigh Coal and Navigation Co., .....	9	13,484
G. B. Markle & Co., .....	17	62,520
Lehigh Valley Coal Co., .....	9	109,150
Estate of A. S. Van Wickle, .....	13	45,302
Calvin Pardee & Co., .....	11	42,922
Upper Lehigh Coal Co., .....	2	128,298
C. M. Dodson & Co., .....	3	68,892
John S. Wentz & Co., .....	1	149,204
M. O. Kemmerer & Co., .....	2	50,458
Audenreid Coal Co., .....	1	78,170
Total and average, .....	89	71,629



**Number of Fatal and Non-Fatal Accidents, and Tons of Coal Mined per Accident.**

Names of Operators.	Number of accidents, fatal and non-fatal.	Tons of coal mined per accident.
A. Pardee & Co., .....	14	29,735
Coxe Brothers & Co., Inc., .....	24	44,967
Lehigh Coal and Navigation Co., .....	14	66,525
G. B. Markle & Co., .....	26	40,878
Lehigh Valley Coal Co., .....	24	40,551
Estate of A. S. Van Wickle, .....	18	30,931
Calvin Pardee & Co., .....	13	38,332
Upper Lehigh Coal Co., .....	4	64,149
C. M. Dodson & Co., .....	8	25,834
M. O. Kennerfer & Co., .....	2	50,458
J. S. Wentz & Co., .....	1	149,204
Audenreid Coal Co., .....	1	78,170
Total and average, .....	149	42,734

**Comparative Statement Showing the Number of Tons Produced, Number of Fatalities, Tons of Coal Produced per Life Lost, Number of Persons Employed per fatal accident, and Number of Deaths per Thousand Employed each Year for the Past Ten Years.**

Years.	Production of coal in tons.	Number of fatal acci- dents.	Tons of coal produced per fatal accident.	Number of persons employed.	Number of persons employed per life lost.	Number of deaths per thousand persons employed.
1892, .....	5,842,721	48	121,725	16,277	252.28	3.307
1893, .....	6,229,668	58	107,370	17,540	339.19	3.103
1894, .....	6,132,627	58	105,735	18,361	302.48	3.561
1895, .....	6,390,905	52	126,750	18,467	316.57	3.470
1896, .....	5,872,427	42	139,819	17,568	355.13	1.941
1897, .....	5,487,550	33	166,289	17,119	418.28	2.184
1898, .....	5,555,850	32	173,620	14,649	457.78	3.014
1899, .....	6,194,627	42	143,977	14,293	322.39	3.666
1900, .....	6,156,784	40	154,269	15,111	377.75	2.666
1901, .....	6,374,909	40	166,248	16,106	268.43	3.750

## Nationalities of Persons Fatally and Non-Fatally Injured.

	Americans.	French.	Welsh.	Germans.	Irish.	Hungarians.	Poles.	Austrians.	Italians.	Slavs.	Total.
Fatal accidents, .....	11	1	2	3	2	18	14	2	1	5	60
Non-fatal accidents, .....	24	2	2	4	3	25	10	2	2	5	89
Total, .....	35	3	4	7	5	43	24	4	3	10	149

TABLE of comparison showing the number of different causes of fatal accidents in this District for the past ten years.

Causes of Accidents	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	Total.
Asphyxiated by gas, .....						5					5
By explosions of gas, .....		1	1	1				2	2		7
By falls of coal, rock and clay, ..	25	18	21	24	18	9	16	18	14	20	192
By premature blasts and explosions of powder, .....	2	11	15	7	2	2	1	2	4	6	52
By mine, railroad and dump cars, including motors, in and about the mines, .....	15	15	15	19	11	10	8	9	13	15	124
By machinery, .....	3	4	3	2	4	2	3	2	1	2	26
By boiler explosions, .....				1	3						4
From miscellaneous causes inside and on the surface, .....	3	9	3	4	4	5	4	10	6	8	56
Total, .....	48	58	58	52	42	33	32	43	40	60	466



Recapitulation of non-fatal accidents as per Table V.

Occupation.	Number Injured.	Per cent.	Nationality.	Number Injured.	Per cent.	Causes of Accidents.	Number Injured.	Per cent.
Foreman, .....	2	.002+	Americans, .....	24	.007	By explosions of C. H. gas, .....	4	.2044+
Miners, .....	32	.035+	Welsh, .....	2	.002+	By fall of coal, clod and rock inside, .....	24	.0263+
Mine laborers, .....	15	.016+	Germans, ..	5	.005+	By fall of coal, rock and clay on stripping, .....	3	.2041+
Drivers and patchers, .....	4	.004+	Irish, .....	5	.005+	By premature blasts, etc., .....	4	.2067+
Company laborers, .....	3	.003+	Hungarians, ..	25	.028	By explosions of powder, .....	6	.0134+
Door boys, .....	3	.003+	Poles, .....	10	.011+	By mine cars in the mines, .....	12	.0146+
Outside laborers, .....	17	.019	Russians, ..	5	.005+	By mine and railroad cars on surface, .....	13	.2022+
Brakemen and pumpmen, ..	2	.002	Slavs, .....	5	.005+	By mine and dump cars on stripping, .....	2	.2041+
Ironmen, .....	2	.002	Austrians, ..	9	.010	By locomotive and air motors, .....	4	.2063+
Firemen, .....	1	.001	Italians, .....	9	.010	By machinery, .....	6	.2064+
Slate pickers, .....	2	.002				From miscellaneous causes inside, .....	7	.2064+
Log skidders, .....	1	.001				From miscellaneous causes on the surface, .....	5	.2066+
Jig runners, .....	5	.005+						
Drivers, .....	5	.005+						
Supply men, .....	1	.001+						
	89	100		89	100		89	100



TABLE OF VENTILATION—Showing the method of ventilating, revolution and diameter of fans, quantity of air in circulation, Number of splits and the number of men employed in each split in the several collieries as reported for the month of November, 1901.

Number.	Names of Collieries.	How ventilation is pro- duced.	Revolutions of fan per minute.	Diameter of fan in feet.	Number of Cubic Feet of Air Measured at—			Number of Men Employed in Each Split.							
					Inlet.	Face of Runway.	Outlet.	Number of splits.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.
1	Hazleton No. 1.	Fan.	72	16	62,652	8,070	61,792	7	76	16	39	6	13	10	14
2	Hazleton No. 2.	Fan.	70	16	57,920	97,155	47,990	6	4	28	34	29	16	6	82
3	Hazleton No. 3.	Fan.	70	16	67,990	60,670	67,000	1	33	29	45	31	26	29	56
4	Hazleton No. 8.	Fan.	62	20	89,268	23,430	15,633	7	10	53	29	8	13	19	10
5	Hazleton shaft No. 4.	Fan.	69	16	41,356	5,645	48,900	5	65	19	9	27	23	16	
6	Spring Brook No. 1.	Fan.	70	16	44,000	26,125	52,000	6	29	8	9	16	21		
7	Spring Brook No. 2.	Fan.	50	20	37,700	36,700	42,000	4	12	17	7	12			
8	Drifton No. 1.	Fan.	58	24	35,000	35,000	38,000	3	40	29	16				
9	Drifton No. 2.	Fan.	68	20	36,880	16,160	39,700	4	30	24	20	25			
10	Drifton No. 3.	Natural.			7,000	800	7,800	1	11						
11	Eschey No. 1.	Natural.			20,000	5,000	25,000	1	8						
12	Eschey, Brook Mountain.	Fan.	60	16	33,000	26,800	33,000	4	17	8	8	21			
13	Eschey shaft No. 10.	Natural.			28,000	23,000	33,000	4	82	50	17	16			
14	Seaton.	Natural.			8,000	7,000	12,000	2	11	38	17				
15	Seaton.	Natural.	160	12	8,700	18,711	20,000	2	44	38					
16	Beaver Meadow No. 2.	Fan.			26,820	18,711	20,000	2	13	8					
17	Beaver Meadow No. 4.	Fan.	90	20	36,360	4,800	16,575	7	12	9	10	21	29	9	6
18	Lehigh.	Fan.	110	18	36,700	22,980	23,000	7	14	5	38	8	4	11	4
19	Gowan Nos. 1 and 2.	Fan.	95	20	36,700	23,000	23,000	5	31	15	3	15	5		
20	Gowan No. 4.	Fan.			31,430	26,029	31,820	7							
21	Nesquehoning No. 1.	Fan.	48	24	91,858	48,324	105,700	5	40	8	10	15	2		
22	Nesquehoning No. 1.	Fan.	69	16	46,231	25,159	53,700	7	23	12	13	21	4	14	
23	Nesquehoning No. 1.	Fan.	110	16	12,506	9,600	32,000	3	10	18					
24	Lansford No. 1.	Fan.	70	24	28,000	26,000	40,121	3	106	10					
25	Lansford No. 2.	Fan.	62	24	28,000	26,000	40,121	3	106	10					
26	Lansford No. 3.	Fan.	110	24	28,000	26,000	40,121	3	106	10					
27	Lansford No. 4.	Fan.	60	16	33,346	36,350	62,500	2	33	36	21	35			



### Mine Improvements.

The following improvements were made at the several collieries of the district during the year 1901.

#### Coxe Brothers & Co., Incorporated.

**Drifton Collieries.**—At Drifton slope No. 1, or rather a continuation of Drifton slope No. 1 basin, extensive diamond drill borings have been made to prove the Mammoth vein in its connection with the Lattimer basin. The territory was divided into three sections, and contracts to strip were let to T. A. Gillespie Company, New York; Cuyler Brothers, Hazleton, and Thomas Crawford, Lock Haven. The aggregate amount of material to be moved will be about two and one-half million cubic yards, by which one and three-quarter millions tons of Mammoth vein coal will be made available for mining. While it was first supposed that the Drifton basin is a continuance, or rather a Mammoth basin connected with the Lattimer Mammoth vein, it was found that the Lattimer basin spoons at about three thousand feet from the Lattimer land line, and another basin sets in towards the north, which in its general strike lays north of Lattimer and Drifton. The Buck Mountain basin continues for the whole distance, but a cross-axis cuts off the No. 1 basin and lets the No. 2 basin continue as the principal basin.

No. 2 Buck Mountain gangways approach the Lattimer land line within 1,800 feet, showing a regular widening of the basin and the tendency to open out into the Lattimer Southern basin the indications of which have already appeared in some breasts driven to the south from the west gangway.

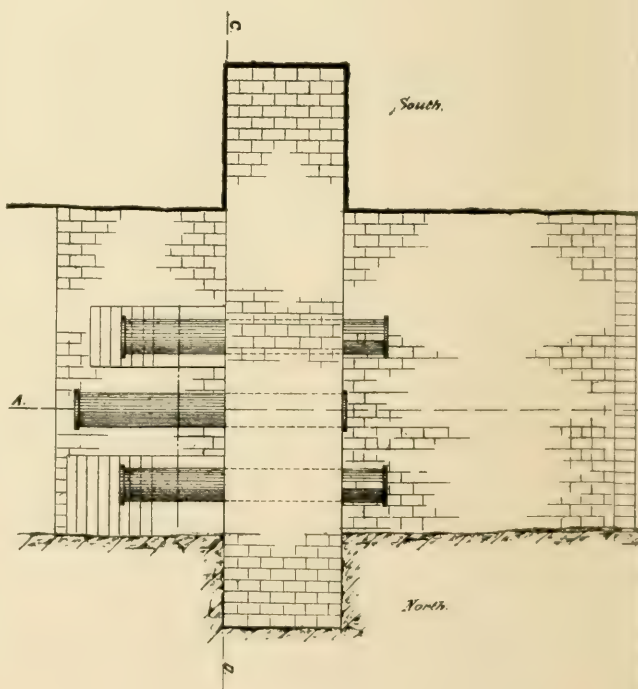
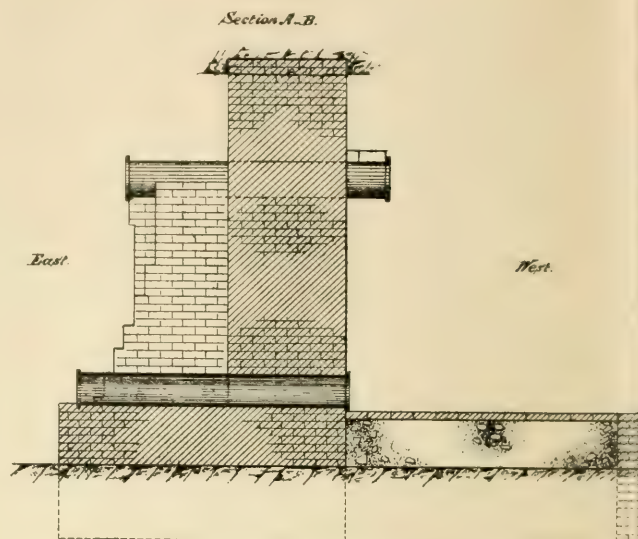
**Eckley, Buck Mountain Collieries.**—Nothing new developed and the principal opening work consists in strippings which are contracted for to Cuyler Brothers of Hazleton and Dick & Co., of Hazleton.

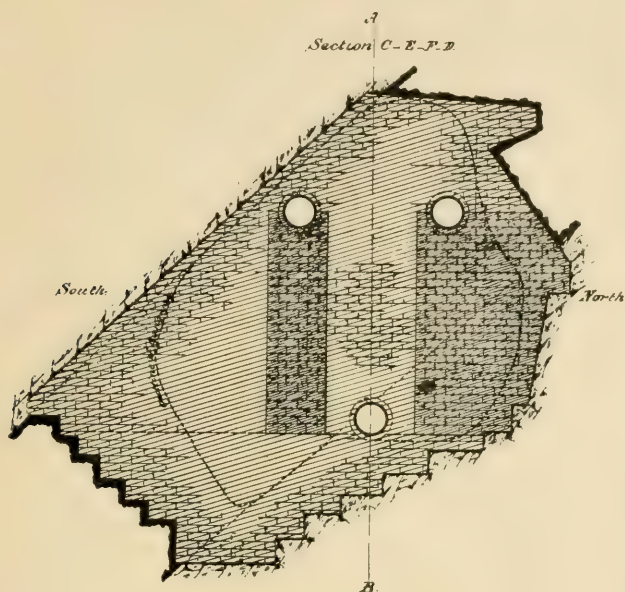
**Stockton.**—The operation of this breaker was discontinued in May on account of the serious interference of water accumulating in the old Stockton workings. An attempt had been made to sink in the Wharton to lower levels, but as mentioned in last year's report, even the small opening of a sinking slope disturbed the overlying strata to such an extent that this company would not take the risk of continuing workings below present levels for fear of the intervening strata breaking, and that a disaster would possibly be the consequence of it. No robbing is done in the Wharton vein below the water level in the old Stockton workings, therefore we feel perfectly safe in continuing the present system of mining with the water level above us, but we should not take the risk of going to lower levels or weakening the ground by robbing.

The coal mined at Stockton at present is taken on D. S. & S. R. R. cars to Beaver Meadow breaker for preparation.









# *Brick Dam*

*erected*

*in North West Wharion Gangway*

*Bearer Meadow Slope 1½ 2.*

*Coxe Bro & Co. Inc.*

*Scale ¼" = 1 ft.*

*Edgar Threllick  
Mining Eng near*



Beaver Meadow Colliery.—The North Temperance strippings have been completed by Crawford & Dugan. The extension of No. 8 strippings was completed by Cuyle Brothers. The Greenfield strippings are continued with two shovels under contract with Cuyle Brothers.

A slight fire was discovered in the old slope, Nos. 2 and 3 workings which has been abandoned since the sixties. The fire apparently started through a brush fire taking hold of stumps, and as the covering at that spot does not exceed from eighteen to twenty inches of soil, the fire through the roots was started in the coal. It was easily gotten under control by simply digging it out, together with a liberal application of water so that material was cooled off sufficiently to be handled.

Considerable trouble had been experienced in the autumn on account of the unparalleled influx of water, which not only drowned Beaver Meadow, but also the adjoining collieries to such an extent that the water rose at Coleraine within four feet of the Beaver Meadow working level. Jeanesville being drowned and pumping abandoned, made the condition very precarious, because the pillar between Coleraine and Jeanesville is an unknown quantity, it therefore was decided to erect a dam in the gangway through which a connection is made with an intrusion from the Coleraine workings, and sketch of the dam is attached to the report. Fifteen thousand bricks and thirty-two barrels of cement were used in construction.

The Beaver Meadow drainage tunnel, representing a total distance of  $5,486\frac{1}{2}$  feet was connected on January 2, 1902, and has been completed. This whole tunnel work consists of 600 feet of open cut as approach, about 550 feet of drift, double timbered and the balance rock. Rock appears favorable and requires no timber. This tunnel at present drains slope No. 4 basin, but it is contemplated to continue the system of drainage from Slope No. 4 into Slope No. 2, which will practically drain the Beaver Meadow property. An extension of the drainage system to Coleraine or Evans colliery is not contemplated on account of the difficulty in carrying an additional amount of water through workings which are still in operation, which would be the case by running Coleraine water into Beaver Meadow, Slope No. 2, or eventually Slope No. 4.

Derringer Gowen Collieries.—The air compressors mentioned in last year's report have been put in service and are used at present for hoisting and pumping in the sinking slope developing the bottom of the Buck Mountain basin between Derringer and Gowen No. 4. An air motor has been received to handle coal on upper levels, but the pipes have not been installed yet. In Gowen Nos. 1 and 3 the plane workings are extended in the Wharton vein, and Big vein is opened by chutes being driven through the intervening rock from the Wharton vein.

The disastrous floods of 1901 affected the Derringer colliery only for any length of time. Drifton, Eckley, Stockton, Beaver Meadow and Gowen were able to resume operations as soon as railroad communication was opened up.

G. B. Markle & Co.

Jeddo No. 4.—Two Shaker screens installed.

One 250 H. P. Babcock & Wilcox boiler added to plant.

One 100 H. P. Erie City boiler removed.

One 2,000 H. P. Warren Webster & Co., heater installed in lieu of one 1,250 H. P. heater of same manufacture removed.

Four Green Ridge pickers added to screen room.

Pneumatic pumping system installed at water works on south side.

Tunnel C driven from Wharton to Wharton through the anti-clinical, bottom of No. 4, a distance of 210 feet.

Tunnel D driven from Mammoth vein to Wharton a distance of 200 feet, together with plane K, connecting tunnels C and D.

Plane J driven in east send second basin Wharton.

Single track slope sunk in Wharton vein from Oakdale first lift to bottom under Mammoth vein slope. Gangway driven 100 feet west and at this point a tunnel turned to the north will eventually be connected with the drainage system.

H. K. Porter Company 10"x14" locomotive added to plant. Fifty-six inch hydraulic wheel press added to machine shop and smith shop addition erected.

Highland No. 5.—Slate conveyor system has been abandoned; slate is now hauled to banks by locomotive.

Compressed air haulage system increased by a three inch pipe line extended through tunnel G to second lift Pink Ash gangway, a distance of about 2,250 feet.

A third three-stage Norwalk Compressor 28x30 is being installed.

Three Shaker screens have been added to plant.

45 Kilowatt Westinghouse dynamo and an Ames sixty-five H. P. engine added to the electric light plant.

Two 250 H. P. B. & W. boilers installed.

One set steam boiler rolls, 30x36 added to plant.

Manway to Pink Ash workings near Cross Creek canal has been closed up, and a new man-way opened near the eastern end of Japan village.

Goyne duplex 12"x7"x12" circulating pump for compressors installed in lieu of the Jeanesville 8"x5"x8" pump removed.

Additions have been made to boiler house, compressor house and electric light station to accommodate additions to plants.

Highland No. 2.—Two Green Ridge pickers installed.



Fan blast engine and fan added to blacksmith shop.

New three inch wrought iron water pipe line laid from Highland No. 1 to Highland No. 2.

Slope and airway sunk in over-lying vein western end, 310 feet.

One 100 H. P. Erie City boiler and a pair of 14"x18" second motion Stroh engines installed.

One No. 12 Cameron pump with Goyne water end placed in first lift Slope A, Highland No. 2 and fourteen inch line column carried to main bottom.

Ebervale.—A sixteen feet Guibal fan manufactured by the Vulcan Iron Works installed at Ebervale No. 3, in place of the ten feet Crawford & McCrimmon fan removed.

Blast fan and engine added to blacksmith shop.

Surgical rooms with appliances have been installed at Highland No. 1, No. 2, No. 5, Jeddo No. 4, and Ebervale Nos. 1 and 3, in accordance with law.

### Lehigh Valley Coal Company.

Hazleton No. 1. Colliery.—Sixteen foot fan transferred from the Diamond to Buck Mountain vein on south side of basin at old No. 6.

Location of the L. V. R. R. No. 1 colliery branch moved 1,000 feet to the westward, thus releasing the block of Mammoth tied up under the old Horse Shoe curve.

Hazleton No. 2 Colliery.—The Lehigh Valley Coal Company continued silting at intervals during the past year, thus confining the fire to the former limits.

Hazleton No. 3 Colliery.—On the third lift a tunnel was driven from the Wharton to Buck Mountain vein and another from Primrose to the Orchard vein.

The third lift main tunnel south was extended from the Orchard to the Diamond vein.

Second outlet was completed from Diamond to surface.

The head of No. 3 slope was changed from a back switch to a landing turnout.

The Hazleton No. 3 colliery branch, L. V. R. R. was also changed, thus releasing a large body of coal for stripping.

Hazleton No. 5 Colliery.—A second outlet was completed from third to second lift on Buck Mountain vein and from the Buck Mountain to the surface.

Hazleton Shaft Colliery.—A sixteen foot reversible fan was installed on the Primrose vein outlet, south side of basin.

A twenty foot reversible fan installed on the Buck Mountain outlet on the north side of basin.

A tunnel was driven from the Primrose to Diamond vein, third lift.

A tunnel was driven from Mammoth to Primrose, second lift. No. 2 district.

A six inch rope hole was completed from the surface to head of No. 2 Wharton plane.

Spring Brook Colliery.—A tunnel was completed from Buck Mountain to Lykens Valley vein fourth lift, No. 2 district. Also tunnel on same level southward from the Buck Mountain to the overlap of said vein.

A tunnel was driven from the Wharton to the Buck Mountain vein, No. 1 basin.

A tunnel is also being driven from the Buck Mountain to Lykens Valley in the bottom of the basin.

The main portion of the breaker was rebuilt.

Spring Mountain Colliery.—The breaker was operated as a washery until May 1, 1901. The banks having then been practically used up, operations were suspended, since which time the work has been confined to pumping.

Examination of Applicants for Mine Foreman and Assistant Mine

#### Foreman Certificates.

The annual examination of applicants for certificates of qualification for mine foreman and assistant mine foreman was held in the Pine Street School building at Hazleton, on June 27th and 28th, 1901.

The board of examiners were W. H. Davis, Inspector of Mines; A. W. Drake, Superintendent; Patrick Smith and George McGee, miners.

The following named persons, having passed a satisfactory examination, were recommended and received certificates.

#### Mine Foreman.

Ludwig Linderman, Gowen.

Thomas Newton, Jeddo.

James Renshaw, Jeddo.

John A. Reeves, Lansford.

William Derbey, Lansford.

Neal Gallagher, Sandy Run.

Henry Hawk, Hazleton.

Frank Breame, Jeunesville.

#### Assistant Foreman.

John Mitchell, Lansford.

George Aiken, Lansford.

William H. Philips, Hazleton.

John McCann, Sandy Run.

Charles Yost, Freeland.

John Quigley, Jeddo.

### Remarks on Fatal Accidents.

In reviewing these casualties I shall endeavor to give a clear description of each accident, and the causes leading up to it, showing how it might have been averted, and placing the responsibility in each case. This may be contrary to the usual custom, but it is done with the hope that a careful perusal of these will be made by the employes in and about the mines, which will cause them to resolve against taking unnecessary risks in future, for in my opinion a repetition of such fatalities can only be averted by the miners themselves.

During the year ending December 31, 1901, sixty persons lost their lives in and about the mines of the district from various causes; forty-eight and one-third per cent. by falls of coal, clod and rock; ten per cent. by premature blasts and explosions; twenty-five per cent. by locomotives, mine and railroad cars, and sixteen and two-third per cent. were due to miscellaneous causes. Strange to say that those who should have the greatest experience were the most unfortunate this year about the mines. Of these sad occurrences, the miners and miners' laborers were the most reckless in running into danger, and represent over seventy-one per cent. of the total number of accidents. The fact is evident that the record of fatalities this year surpasses any previous record, in the history of mining in this district. Yet when we take into consideration the sort of men that are employed in the mines of this region it is fortunate that the record of accidents was not double the number.

When it is considered that of the sixteen thousand men and boys employed, sixty per cent. are foreigners, and that fifty per cent. of this number are unable to speak, or even understand the English language, should explain why so many were killed and injured about the mines of this district in the past year. It is a well known fact that with this class of miners, when they are cautioned by the mine foreman or even by their fellow miners, to find them disregard the warning and walk directly into the danger, with the result that they are either injured or killed, which is due to their inability to properly understand the warning given them.

The responsibility for the deplorable condition of affairs existing in this region to-day, rests entirely with the miners, and the act of Assembly of 1897, which provides for the examination of persons seeking employment as miners in the Anthracite coal region, and to prevent the employment of incompetent persons as miners in the

Anthracite coal mines. This act is generally conceded to have done more than any other cause to drive from the region the experienced miners of a few years ago, and to burden the district with the ignorant and unskilled workmen that are to be found in the mines to-day, who have contributed largely to the increased number of accidents, which a careful perusal of the annual records will prove conclusively.

An examination of the tables contained in this report will show that if the sixty lives sacrificed in 1901, sixty-eight and one-third per cent. were of this class of workmen. The responsibility, in the opinion of the writer, rests with the miners themselves, because under the act, there have been nine miners appointed periodically by the county courts to sit as a miners' examining board to qualify persons seeking employment as miners throughout this Commonwealth. How well they have taken care of the interests of their fellow miners, by complying with the act of Assembly or the mandates of the court by which they were appointed, the prevailing conditions demonstrate beyond a question of doubt.

The step taken by the Chief of the Bureau of Mines in causing to be printed for distribution, copies of the Anthracite mine law in the several languages, is to be commended, and in the opinion of the writer will beyond doubt have a great tendency to reduce these sad occurrences in the district.

No. 1. Frank Folwain, a miner employed by C. M. Dodson & Co., No. 11 slope workings in Beaver Brook, was instantly killed on the 11th of January, at face of breast in the east gangway. The first man upon the scene was John King, a company hand. He testified that Folwain was engaged working on the bottom bench. "When I visited his breast five minutes prior to the accident, I cautioned him about the bad condition of the top, which he admitted was bad, and said he would take it down." The assistant foreman also notified him to take the clod down, which he promised to do, but instead he continued to mine under the bony bench, unheeding the warning of his fellow workmen and disobeying the orders of the foreman, until the top fell, with the result as stated. An examination of the breast, proved that had the victim taken the proper precautions or even obeyed the orders given him to take the bench down, this accident could have been averted, therefore I do not hesitate to say that he was responsible.

No. 2. Michael Masholock, a miner employed in breast No. 26, West Buck Mountain, operated by the Lehigh Valley Coal Company at Hazleton, was fatally injured by a fall of rock on January 12, and died in two hours. The investigation proved the victim to have been a careful, experienced miner. At the time of the accident, he was engaged putting in props, but between the props that he was placing



for conveying a chute up the centre of breast, there was a sulphur ball running across which he considered safe, after properly sounding it, and he went on preparing to place the second prop, when without warning the rock fell upon him, inflicting injuries with the aforesaid result. Under the conditions, the accident was unavoidable.

No. 3. Fred. Guiderjahn, a miner employed at East Crystal Ridge colliery, operated by A. Pardee & Co., was fatally injured on January 12, and died while being taken to the Hazleton Hospital. There was no person on the scene when the accident occurred, but from a careful examination of the breast, which was in the Parlor vein, together with the testimony of those who went to his rescue, it appeared that Guiderjahn had been barring down coal at face of breast, when a greater rush of coal came than he expected, knocking him down and inflicting internal injuries, resulting as stated. I think this accident could have been averted by the victim himself, but his methods were very impractical.

No. 4. Alex Mickaloski, a miner employed in Hazleton No. 1 colliery, operated by the Lehigh Valley Coal Company, was fatally injured by an explosion of powder on January 18, 1901, and died in a few hours. According to the testimony of the victim himself, he was engaged in thawing a stick of dynamite by the flame of his naked lamp, when the paper wrapper encasing the powder ignited. He threw it out of his hand, and unfortunately for him, it landed on a full keg of powder, exploding it with the result as stated. This accident was due to reckless methods of thawing powder, and could have been averted by the use of a properly devised thawing kettle.

No. 5. John Hydock, laborer, employed in No. 4 colliery, was instantly killed on January 29. He, with his miner and another laborer had made an examination of the working places where they were engaged laying track across an abandoned breast for the purpose of continuing the gangway through the pillar, with a view to final robbing. The three men considered the place safe, and Hydock commenced to spike the rail near the face, assisted by the miner, when suddenly a flake of rock fell from the top, pinning him to the ground with the aforesaid result. A careful examination of the place showed that the accident was unavoidable.

No. 6. Richard Williams, a patcher employed at No. 5 colliery, Upper Lehigh, was fatally injured on February 4, and removed to the Hazleton Hospital, where he died February 27, 1901.

Williams was coupling a car on the gangway, according to his own testimony, when something struck him on the head, fracturing his skull. John O'Neil, the team driver, testified that on taking a car out from the dip gangway he discovered a rail turned out. "I stepped off the car and left the team in charge of my patcher. After



repairing the track, I returned to the team and found my patcher in a sitting position and bleeding. I carried him to the bottom of the slope, but he did not speak. I called to see him at his home that evening, when he told me that he was about to couple the cars when something struck him, but I did not place much confidence in his story."

An examination of the scene of the accident, in addition to the testimony, proved conclusively that Williams was injured after coupling the car, by having been squeezed between the side of the car on the gangway and the mule. This accident could have been averted by ordinary precaution on the part of the victim.

No. 7. John Vasiliko, hitcher, employed at No. 2 Rock plane, Coleraine colliery, was instantly killed on February 4. He had sent a car up the plane, when the remaining cars on the siding moved by gravity into the foot of the plane. He attempted to uncouple the first car, preparatory to sending it up the plane, and while thus engaged he was crushed by the coming together of the cars. There is no doubt in my mind that this was a common practice of the victim, which cost him his life.

No. 8. Charles Howis, jig runner, employed on the Stockton breaker, was fatally injured, and died at the Hazleton Hospital. He had left his place of work and was walking through the breaker when he saw that the belt operating the drag line had slipped off, and reported the matter to Andrew Bartish, foreman in charge of the breaker machinery, who told the boy that he knew it was off, and that he, Howis, should leave it alone, but he attempted to replace the belt when his clothing came in contact with the main driving shaft. He had been carried around by the revolving shaft for some time before he was discovered and the machinery stopped. A careful examination of the place, together with the testimony of witnesses, showed this place to have been well protected, and that he had no business whatever with the belt, as it required two or three men to replace it.

No. 9. Andrew Sochrell, dumpman, employed on the Beaver Meadow No. 2 stripping, was instantly killed on February 7. He was about to dump a car of clay on the bank, and while engaged in removing the pin on the north side of the car, the pin on the south side broke, causing the loaded box to fall upon him, crushing his head against the truck, resulting in instant death. The investigation showed this accident to have been unavoidable.

No. 10. Mike Bodinskey, laborer, employed at Jeddo No. 4 colliery, was killed on February 11. He was engaged with the timbermen receiving timber on the gangway, when a driver came along with a trip of cars for the gangway and breast men. Bodinskey, with the other timbermen, stepped between the gangway legs to allow the

trip to pass, and while there the first car of the trip came in contact with an improperly braced leg, which fell against the victim, forcing him against the car and crushing his head between the car and gangway timber, resulting as stated. The examination, together with the testimony of the witnesses, showed that the miner in charge of the timbermen was responsible for this accident, in permitting the men in his charge to stand in an unsafe position while the trip was passing, also for permitting the driver to advance with the trip before he had properly secured the timber.

No. 11. Patrick Gallagher, motor runner, employed at Highland No. 5, was instantly killed by being caught between a derailed motor and a pillar of coal on February 11. He was taking a trip of cars from one siding to another on a down grade, and in some manner lost control of the motor. A careful examination of the locality, together with the testimony of witnesses, showed the motor to have been running at a very high rate of speed. The motor had left the track and ran fifty-one feet before it ran into the coal rib of gangway, where the cars telescoped, and the victim was found dead between the derailed motor and rib of gangway. Albert Smith, patcher, was on the rear end of the trip, and thought the trip was running at an extraordinary high rate of speed. He called the engineer, but received no response; he then walked forward along the trip to the motor, where he found the motor runner lying dead between the motor and coal rib of gangway across the track. This was an accident due entirely to reckless running of the motor, for which the victim sacrificed his life as the penalty of such recklessness. The Mine Inspector, to avoid any further possibility of accidents from this cause, directed shoes to be used to control the speed of trips in the future.

No. 12. George Feddor, miner, employed at the Beaver Brook colliery, was instantly killed on February 21. He had broken through from the gangway into the face of breast in the Lykens Valley vein for the purpose of improving the ventilation. He had been told by the foreman to take the bony coal down, but instead he fired a shot on the rib to enlarge the hole, and while working out the loose coal after the shot, he was caught beneath a fall of bony coal. An examination of the place, together with the testimony of the men, showed that the victim alone was responsible for the accident, as he should have placed temporary props while undermining the bony bench. This he neglected to do, after having been ordered to do so by the foreman, which neglect cost him his life.

No. 13. Michael Lukash, a laborer, employed at East Crystal Ridge colliery, was crushed to death between a rock and gangway collar on February 23. He, with his miner, John Costick and his fellow laborer, George Kemmil, were engaged in reopening a gangway through a cave of rocks, which were within two feet of the gangway

collar, and at a height of two feet above the rail a large rock protruded. Lukash was seated on the rock, drilling a hole in it with a jumper. He was turning the steel while George Kemmil was striking for him, when slowly the rock was moving downward. Lukash, feeling confident that there was no danger, continued drilling, until suddenly, by the last movement of the stone, he was pinned by the rock against the gangway collar with the result as stated. According to the testimony of the witnesses, this accident could have been averted by ordinary precautions on the part of the victim.

No. 14. John Bongo, a miner employed at Hazleton shaft colliery, was instantly killed on March 2. He was working in Breast No. 15, East Wharton gangway, second level. He knew the top was bad, for he had been told by the foreman the morning previous to the accident that he should do no blasting, and should secure the top with props before doing any more work at the face of the breast, but according to the testimony of his laborer, who was the only witness to the accident, Bongo, unheeding the order of the foreman, upon reaching the breast commenced to drill a hole in the face, telling his laborer that he would put the props in place after he had fired the shot. But he had already neglected propping too long, for while he was engaged in drilling the hole the rock fell, with the result as stated.

An examination of the place, together with the testimony of witnesses, proved beyond question that the victim, by his failure to properly secure the top with props, and in disobeying the order of the foreman was alone responsible.

No. 15. Martin Shefanic, a miner, employed at Hazleton shaft colliery, Slope No. 3, was fatally injured on March 2, and died while being taken to his home. He and his partner, August Winters, were working in the second lift, No. 3, Primrose, west gangway. They had drilled a hole and tamped it, and Winters drew the needle and threw it down the schute, expecting his partner to pick it up and place it out of the way. But before his partner discovered the needle, Shefanic had occasion to go down the schute for something on the gangway, and came in contact with the needle, the point of which penetrated his stomach with the aforesaid result. This accident was due to the carelessness of both the victim and his partner, and while this is a common practice with some miners, it should be a lesson to all miners to give it up.

No. 16. Andrew Podensin, a repairman employed at Hazleton No. 1 colliery, was instantly killed on March 2. He had been making repairs to the track at the foot of the slope and was gathering his tools when the car was being hoisted, but by the breaking of the chain, the car came back. The bottomman gave the alarm, but instead of Podensin going to a place of safety with the bottom-man, he



went back for his tools, and in making his escape he was overtaken by the runaway car, which crushed him against the timber with the above result. The investigation showed that the ropes and chain on the slope were examined daily by John Schugard, the colliery blacksmith, who had been doing the work for the past six years. He testified that he had examined the west side chain at noon. The east chain was at the bottom, and he considered it safe. "The assistant foreman, Smith, testified that he rode upon the two cars that had been wrecked, before noon, and found a broken link in the chain. I renewed, or replaced the chain with a heavier one which I considered perfectly safe, and strange to say it broke with the second car. I cannot understand it." The first wreck was caused by the breaking of the hitching staple when the car was going over the apex at the top of slope, when the car went back to the bottom of the slope, wrecking two cars. This wreck was cleared up and the second car was being hoisted, when the chain broke, the car going back to the bottom, with the aforesaid result. An examination of the place together with the testimony of the witnesses, showed the accident to have been unavoidable.

No. 17. John Zcetzewicz, a laborer employed at Cranberry No. 1 colliery, was almost instantly killed on March 6. He and his miner, John Ratchkiss, were loading a buggy about 15 minutes after firing a shot, when a sharp edged piece of top rock fell, striking Zcetzewicz on the head and arm with the aforesaid result. An examination of the place, and the testimony, proved that the victim had considered the rock unsafe, and in fact had tried to bar it down, but left it, to load the buggy, which was a mistake on the part of the miner, who, in my opinion was in a great measure responsible for the accident by which the laborer lost his life.

No. 18. John Henry Richards, locomotive fireman employed at Nesquehoning shaft colliery, was fatally injured on March 5, and died March 22, at St. Luke's Hospital, Bethlehem. He was walking along the gangway in advance of the locomotive strewing sand on the rails. The engineer, who thought he was still riding on the engine, sounded the whistle and moved in the gangway while Richards was in a stooping position. He was knocked down, the wheels passing over both legs. A careful investigation of this accident showed that the engineer had properly signalled before moving in the gangway, therefore could not be considered in any way responsible, but the accident was entirely due to the victim having been hard of hearing, which was not known to the foreman until after the accident, which therefore might be considered as unavoidable.

No. 19. Jacob Doman, miner, employed in No. 5 slope, East Crystal Ridge colliery, was instantly killed on March 13. He had come out to the bottom of No. 5 slope, having finished his day's work, when the

driver told him that there was another empty car for him in the trip that was about to be taken in, so he jumped into the rear car, and rode along the gangway and came in contact with a prop, striking his head with such force as to break his neck. His hat and lamp were picked up in the gangway, while his dead body was found in the car by the driver upon reaching the siding. Upon an examination of the place, it was evident that Doman while standing in the moving car, was caught by the prop with the aforesaid result.

No. 20. Mike Pasdon, a laborer, employed at Hazleton shaft No. 40, was instantly killed on April 2. He and the miner had drilled a hole in the top bench, ready to fire, when the miner commenced to drill a hole in the bottom at face of breast, and while preparing to tamp the hole, the top bench fell upon the laborer with the aforesaid result. At the investigation it was shown that the foreman while making a tour of the mine on the day before the accident ordered the miner, Michael Romans, to secure the top bench with props, or blast it down. This order was disobeyed, which made the miner responsible for the death of his laborer.

Nos. 21 and 22. Andrew Bore, miner, and John Salko, laborer, were employed at Evans colliery, and were instantly killed by a premature blast on April 11. They were engaged on the night shift, and were the only men, outside the driver, working in the slope on that night. At 9.30 P. M., John Gordon, the driver, while going to the face of gangway to change the car, was horrified to find the lifeless bodies of the men in the gangway. He immediately reported to the pump-man, and the foreman, who brought men with him and removed bodies of the unfortunate men to their homes. A careful examination of the place proved beyond any doubt that the men were tamping a charge of dynamite in a hole in the bottom rock with a steel bar, when the charge exploded, literally blowing them to atoms. These men sacrificed their lives by their unlawful and reckless method.

No. 23. Eugene Gabour, brattice builder, employed at Hazleton shaft, No. 40 colliery, Slope No. 5, was fatally injured on April 11, and died at the Hazleton Hospital. After completing work, he sat down on the bottom of platform to eat his dinner, and while thus engaged, the miner at the face of the breast gave the alarm that he was about to fire a shot. Gabour remained on the platform, and when the shot was fired a piece of coal was thrown through the brattice, striking him on the head, fracturing his skull. A careful examination of the place, together with the testimony of those first to appear on the scene, it was evident that the victim was alone responsible, for he had no business on the platform after completing the brattice, and had he withdrawn when the miner told him he was about to fire, the accident would not have occurred.



No. 24. George Pado, slate loader, employed at the Coleraine breaker, was fatally injured on April 13, and died at the Hazleton Hospital.

He was engaged in oiling a slate truck under the breaker, when the loaded trucks were run down from another track, bumping the truck he was oiling and pinning his head and chest between the truck and the foundation wall of the breaker, causing such injury that he died shortly after in the hospital. A careful investigation of this accident showed that it was the regular practice before commencing to oil the cars, for one loader, to notify the other one, but the victim had neglected doing so on this particular occasion, which neglect cost him his life.

No. 25. Bastita Clauser, miner, employed at Gowan Nos. 1 and 3 slope, was fatally injured on April 13. He was engaged in East Creek tunnel robbing the gangway and driving breast No. 128 on the south side. The breast being flat, the road followed into it for about thirty feet, the seam or vein being about twenty-five feet thick where he was loading the coal. While engaged loading a car, a piece of rock fell, striking him on the head, with the aforesaid result.

A careful examination of the place, together with the testimony, proved the accident to have been unavoidable.

No. 26. John McGarvey, slate picker, employed at Spring Mountain washery No. 1, was fatally injured on April 18. He, with other boys, after quitting work for the day, ran out of the breaker. McGarvey was the first to reach the foot of the stairs. He continued running and attempted to cross the slate bank tracks, where he was run down by a car coming in from the bank, fracturing his leg and injuring him internally.

An examination of the place, together with the testimony of the men and boys who were eye witnesses, showed that every precaution had been taken by the man running the car into the breaker, by giving the usual alarm, but McGarvey paid no attention to it, and kept running until he was knocked down by the car. According to the investigation, this accident could have been averted had the victim used ordinary precaution or had given attention to the warning given him by the car runner.

No. 27. John Shewick, miner, employed at Hazleton shaft colliery, Slope No. 3, was instantly killed on April 29. He was blasting a rock skip off the lower side of gangway preparatory to making a siding, and had fired several shots in the coal, undermining the top rock. According to the testimony of his laborer and brother, Mike Shewick, after firing the shot, John returned to work, assisting to load the car, without first sounding the top, and, while thus engaged a piece of the top rock fell upon him, causing instant death.

The investigation showed that the victim through his carelessness in not making the necessary examination after firing the shot, was alone responsible for the accident which cost him his life.

No. 28. James Moy, patcher, employed at Highland No. 5, was killed on July 9. He was running motor No. 3 in place of regular motorman, who was acting as patcher for him in taking a loaded trip down the incline from Plane "A." When part way down, he lost control of the motor, which ran with such speed that it became derailed at the bottom of the incline, and Moy was caught between the derailed motor and the coal rib of gangway, with the aforesaid result.

The investigation proved that the victim alone was responsible for the accident which cost him his life. While the cause of his inability to control the motor is not known, I can only surmise that it was due to reckless running before striking the grade.

No. 29. Ignatius Zubick, laborer, employed at No. 6 shaft colliery, Lansford, was instantly killed on July 11. He was employed in the west gangway. The miner and his laborers went into the face of the gangway, and finding, as he thought, everything safe and secure, they commenced to work. After loading two cars and firing two shots, they left the gangway. When they returned, the miner examined and trimmed after the shot, and thinking the place safe, they again commenced to work. The laborer commenced to load the car, while the other men were engaged drilling holes, when a piece of rock fell from the top, striking the victim and injuring him as stated.

A careful examination showed that the accident was unavoidable and was due to an invisible slip. The miner had taken every precaution to make the place safe, by sounding.

No. 30. Michael Mochecotch, a miner employed at Beaver Brook colliery, was fatally injured on July 17, and died while being taken to the hospital.

He was working at face of breast in No. 10 slope, West Buck Mountain gangway, and had fired a shot in the top bench and returned to trim the top, and while thus engaged a piece of clod fell upon him. The investigation showed that the victim had neglected to take down the clod along the rib of breast, and while he was engaged in barring down the top bench, the overhanging clod fell from behind, causing the injury which cost him his life. This would not have occurred had the victim taken the precaution to either prop the clod or blast it down along the rib of breast, therefore he was alone responsible.

No. 31. Frank Harrit, outside laborer, employed at Derringer colliery, was fatally injured on July 23. He was running a car of screenings out from the breaker while a locomotive was dropping a trip of loaded cars into the drift. Harrit tried to stop the car before it should bump into the trip, and was running alongside the car, holding on to the sprag, and when the car struck the trip it swung the rear

end around and caught his head between the side of the car and the cab of the locomotive, fracturing his skull, from the effects of which he died. A careful examination of the place, together with the testimony of the men, showed that this accident was due to the recklessness of the victim, in starting the car out of the branch while the trip on the main line was passing the switch, for he should not have run the car out until the locomotive on the main line had cleared the switch, therefore, he was responsible.

Nos. 32 and 33. James Kawolski, miner; George Vasloski, laborer, employed at No. 5 slope, Hazleton shaft colliery, were instantly killed on July 25, by the premature explosion of a charge of powder. The men were working at the face of East Wharton gangway on the second level. They had drilled a hole in the south side of the gangway in the bottom rock and had placed a charge in the drill hole and were tamping the hole with a steel bar, when the charge exploded, and the men were literally blown to pieces, and could be identified only by their clothing. The investigation again proved that these men recklessly threw away their lives by violating, not only the rules of the colliery, but all laws in connection with the handling of dynamite. They had been warned on several occasions by the foreman, and on this particular occasion by George Patroma, who was the first person to reach the scene after the accident.

No. 34. Thomas Meenan, driver, employed at No. 1 tunnel, colliery No. 1, Nesquehoning, Pa., was killed August 1. He was coming out the east gangway on top of plane, and in some manner fell under the trip with the aforesaid result. A careful examination of the gangway, together with the position in which the body was found, showed that the victim was evidently running beside the team when he fell backwards to the track, or south rail. According to the testimony of those first on the scene, together with the circumstances in the case, Meenan met death by falling backwards to the track while trying to jump on the moving car. This was an unavoidable accident.

No. 35. Otto Brein, miner, employed opening chutes in West Gamma gangway, Hazleton No. 1 colliery, was fatally injured on August 2, and died next day at his home.

He was standing props on high side of gangway preparatory to starting a new chute from the gangway, when a piece of top rock in the form of a sulphur ball, fell, striking the car and then toppling over upon him, squeezing him severally and causing internal injuries, which resulted as stated. A careful examination of the scene, together with the testimony of eye-witnesses, showed that the victim was a miner of many years experience. He had taken the usual precaution to sound the top, but the rock fell, inflicting such injuries as to cause death. This was unquestionably an unavoidable accident.



Nos. 36 and 37. Michael Remock, miner, and Andrew Chippie, miner. Employed at Jeddo No. 4 colliery, were instantly killed on August 6. The men had fired a shot in the pillar, and had retreated to a place of safety. They were sitting under their platform, when a fall of coal followed the shot which overloaded the platform, causing it to break down on them with the aforesaid result. The investigation showed that the platform was only a temporary or frail structure, built by the men themselves, which they considered safe. They were engaged in robbing pillars, and should have gone out of the gangway when a shot was fired. This error in judgment cost them their lives.

No. 38. Samuel Rupert, miner, employed at Gowen slope No. 4, was fatally injured by a fall of top slate on August 29. He and his partner, were working a breast. Mine Foreman Houser had been in the breast at 10 o'clock A. M., on the day of the accident, examined the top, and told both Rupert and his partner, Fréas Mensinger, that they must take the slate down. Rupert admitted that the slate was loose and promised to take it down, but instead of doing so, he drilled and fired another hole in face of breast. He returned after the shot, and while talking to his partner, the slate fell upon him, causing such injury as to result in death. This accident could have been averted had the victim carried out the orders of the foreman.

No. 39. Joseph Jacquot, a miner, employed at Highland No. 5, was fatally injured on September 12, and died at his home several days later. He, with his partner, were robbing pillars. They had drilled, charged and tamped two holes, one in the bottom and the other in the top bench of Buck Mountain vein. Jacquot was alone when the accident occurred. He had withdrawn the wire from the blasting tube in the top hole and placed a squib, ready to light, when the driver came with a car, and while waiting, he walked about with a lighted lamp upon his head, and unknowingly, ignited the squib which fired the shot, resulting as stated. The investigation showed that, according to Jacquot's own statement, he did not know what had happened. He recalled drawing the wire and placing the squib, but did not light it. The conditions of the place, together with the testimony of those first to appear on the scene proved conclusively that he was alone responsible for the accident, and should not have placed the squib until he was ready to fire the shot, for by so doing, he made the accident possible.

No. 40. John Tewador, miner, employed at Beaver Brook colliery, No. 10 slope, was instantly killed on September 16. He was working a breast in the West Lykens Valley Vein, and had fired a shot in the bottom bench which failed to do its work, so he returned to the face and with a drill commenced to bar the coal left intact by the shot, and while thus engaged, a piece of the top slate fell upon him. A careful examination of the place, together with the testimony of

witnesses, showed that the victim had, previous to firing the shot, tried to bar down this piece of slate. He also cautioned his laborer against standing under it, as he did not consider it safe, and in the face of these facts he deliberately went under the slate and recklessly threw away his life while attempting to bar out the coal in the bottom bench before securing the top, knowing that it was unsafe, before he fired the shot.

No. 41. Lewis Yellon, laborer, employed at the Ebervale colliery, was instantly killed by a fall of rock in a breast, on October 7. He was working with his miner, George Doruaman, in breast No. 15, Tunnel C, east gangway. An examination of the place, together with the testimony of those first to appear on the scene, showed that they had taken out a length of man-way on the west rib of breast to let the coal down. They had pushed the coal down, and the laborer was shovelling the coal back in center of breast. The miner had some business down on the gangway, so he left the laborer in the breast alone, knowing the top was dangerous, and on reaching the cross-heading, the miner in the west breast told him that he was about to fire a shot. Doruaman remained in the cross-heading, instead of withdrawing his laborer, as he should have done. After the shot was fired he heard a fall in his own breast. He hurried to the face, and found the laborer buried beneath the fallen rock. The miner was responsible for this accident.

No. 42. John Stachura, a miner, employed at Beaver Brook colliery, No. 10 slope, was fatally injured on October 11. He was engaged robbing pillars in East Buck Mountain vein, and had fired a shot in the working face of the pillar in the bottom bench, and another in the top bench. His brother, who was laboring for him, testified that he was an eye-witness to the accident, and that when they returned after firing the shot, John started barring out the bottom bench with a drill when a flake of the overhanging slate, which he knew was bad, fell upon him with the aforesaid result.

This accident could have been averted had the miner used ordinary precaution in barring down the top slate instead of attempting to take out the bottom coal.

No. 43. Metro Publisky, a miner, employed at Evans colliery, was instantly killed by a fall of rock on October 11.

He was working in breast No. 1, East Gamma vein. He and his laborer were shoveling coal back from a cross-heading, when a rock boulder fell upon him with the aforesaid result.

According to the testimony of his laborer, Simon Houser, who was the only eye-witness to the accident, the foreman had instructed the miner to secure this piece of rock with props. He had partly done so, and commenced to take a skip off the pillar, and was engaged trimming after a shot when the rock fell upon him. A careful examina-



tion of the place showed that the rock fell out from between two slips, deceiving the miner by its sound, therefore, taking into consideration the precautionary measures taken by the miner. I am of the opinion that this was an unavoidable accident.

No. 44. Stephen Singley, inside laborer, employed at Cranberry No. 1 colliery, was fatally injured on October 15, and died at the Hazleton Hospital.

At 5.30 P. M., while waiting to enter the mine for his work on night shift, Singley took a seat in the sheltering shed of the car-hitcher at the foot of breaker-plane. In a short time Gerlach left for the slope. Before entering the shed over the plane approach, he heard the cry "Look Out!" which signalled the falling of a piece of coal or slate from the top of breaker-plane. Gerlach took refuge in the approach shed, and turning, saw Singley fall about ten feet from the hitcher's shed. The investigation showed that neither Singley nor foreman Gerlach had any business at the hitcher's shed at the time of the accident, and were, in fact, violating the colliery rules by being there.

No. 45. Peter Oleskey, a laborer, employed at Lansford No. 4 colliery, was instantly killed on October 21, by an explosion of dynamite.

He was engaged working at a battery on the night shift. They had loaded all the cars, and he had completed his work, when he discovered the battery blocked by a large piece of slate. Thinking to break the rock, he placed a quantity of dynamite upon it and ignited the fuse. He retreated to a place of safety. After waiting for some time, and not hearing the shot, he concluded it had missed fire, so he returned to ascertain the cause, when the charge exploded, resulting as stated.

The investigation showed that while the victim was not a miner, he was a careful man in handling explosives, and had been doing such work at this colliery for several years. Therefore I have no hesitation in stating that this accident was unavoidable.

No. 46. Constanta Kokanski, miner, employed at Hazleton No. 1 colliery, was fatally injured on October 24, by a fall of rock. He, and his partner, were working in breast No. 34, West Buck Mountain vein. They had fired a shot, and retreated to a place of safety, remaining there for some time. They commenced to drill another hole, when the victim's partner saw a movement in the top, and gave the alarm, "Look Out!" But before Kokanski could escape, a piece of clod in bell shape, fell, crushing him against the side of the chutes, inflicting such injuries that he died at the Hazleton Hospital. From a careful examination of the place, together with the testimony of his partner and those first to appear on the scene, it was evident that they were fully aware of the fact that the top was bad, for they had spent fifteen minutes trying to bar it down, and had left it to work on the face.

The miners were responsible, for when they failed to bar down the clod, they should have taken no further chances, but have blasted it down.

No. 47. Frank Ball, a laborer, employed at Cranberry No. 1 colliery, was fatally injured on October 24, by a fall of clod. He was employed in a breast in the Parlor vein, and was shovelling coal back to his miner, when the fall occurred, inflicting such injuries as to result in death about two hours after, in the Hazleton Hospital. A careful examination of the place, together with the testimony of witnesses, proved that Ball had been cautioned by his miner, but paid no attention to the warning, thinking himself judge of his own safety, and continued working on his own method until the clod fell, resulting as stated.

No. 48. Joseph Yarasinski, a laborer employed at Harwood colliery, No. 5 slope, was fatally injured on October 28, by a fall of rock. He was employed with his miner driving a breast in the Gamma vein. John Panco, foreman, visited the breast at 9 A. M., and warned the miner, Joseph Schultz, to keep the clod down close to the face, also to tell his partner, Vosogo, to do the same. Schultz told his partner to take down the clod, and he commenced drilling a hole for that purpose, but instead of continuing the hole, he tried to bar it down, but failed. He then ordered the laborer to shovel coal back, and while he was thus engaged, the rock fell, with the aforesaid result. The investigation proved the miner to be responsible for not blasting the rock down when ordered to do so by the foreman.

No. 49. Albert Fox, a miner employed at Gowen slope, Nos. 1 and 3 Derringer colliery, was fatally injured on October 28, by a fall of coal.

He and his brother, were working in northwest counter No. 2. In the morning they were unable to work in that breast, the road-man not having completed the road, so the foreman told them to go into northwest "C" gangway, and load out their coal. They loaded four cars, and while waiting for more, they went up to breast "D" and drilled two holes, one in the rib and the other in the top. After firing the shots, he went up to the face and commenced to bar down the shattered bench, when a large peice of coal fell upon him, inflicting such injuries that he died thirty minutes later. After a careful investigation, I am of the opinion that with ordinary precaution this accident could have been everted.

No. 50. John Sivar, patcher, employed at the Harwood colliery, was fatally injured on November 15, by being crushed between locomotive and loaded mine care, on the surface. He was patcher on the locomotive, and the loaded cars taken from No. 1 are pushed up against the loaded cars on No. 4 turn-out, and held there until the locomotive and empty cars are pushed on No. 4 turn-out. The loaded cars are

then drawn out on the main track. This is done to get the locomotive on the rear end, at the breaker. When the accident occurred they ran the trip as usual, but while the cars were being run off the siding, another car was hoisted from the slope and the deceased, John Sivar, told the top-man, Michael O'Hara, to run that car after the trip. The engineer with the locomotive followed the car run down by O'Hara, and reached it about the same time as the trip when running back. Sivar got on the bumper of the locomotive to couple the cars, but did not notice the trip coming back until the collision, when he was crushed between the derailed car and the locomotive, fracturing his skull. He died two hours later at the Hazleton Hospital.

No. 51. William Shellala, miner, employed at slope No. 4, Cranberry colliery, was killed on November 18, by a fall of rock. He had been at work robbing pillars and had been set to clean up another gangway with a view to relaying the track to continue robbing pillars, but according to the testimony of his laborer, he insisted, on the day of the accident, on going into the abandoned section of works to see whether or not it had caved. His laborer plead with him not to go, as he had been forbidden by the foreman, but he moved on a few steps when the rock fell upon him, with the aforesaid result.

No. 52. John Toniola, a miner employed in the Gamma vein, north section of Cranberry colliery No. 1, was killed on November 19, by a fall of coal. He was working in breast No. 26, West Gamma gangway, South Dip, and had fired a shot in the bottom bench, at face of breast, which evidently did not produce the expected result. He then commenced to work out the shot, and while engaged in barring, a part of the bottom bench, which protruded over his head, fell upon him, crushing his head. A careful examination of the place, together with the testimony of those first to render assistance, showed that he had been cautioned by his laborer, who evidently saw the danger.

No. 53. Watkin Williams, a miner of many years experience, employed at Hazleton No. 1 colliery, was killed by a fall of clod on November 20. He and his partner, were working in breast No. 46, East Buck Mountain gangway. According to Jones, his laborer's testimony, Williams had fired a shot in the bottom bench in the morning, made the necessary trimming of the face and drilled another hole to fire when going home. But while working at the face he was caught by the falling clod. He should have blasted it down as he was told by Jones that it was unsafe, but he knew best what he was doing, and considered that he was able to care for himself, but when the fall came he was unable to escape.

No. 54. George Argust, repairman, employed on the night shift at Hazleton shaft No. 40 breaker, was fatally injured on November



21, by falling from the conveyor line to the tracks underneath the breaker, a distance of twenty feet. He, with the other three men on the repair gang, had almost completed their shift. He was the last of the four men to cross the conveyor line, and in some manner lost his balance and fell to the tracks, fracturing his skull. He was removed to the hospital, where he succumbed to his injuries several days later. This was an accident unavoidable under the conditions.

No. 55. Dennis Melley, a miner, employed at Highland No. 5 colliery, was instantly killed by a fall of rock on November 21. He and his partner were taking a cut out of a pillar, leaving a stump. The rock fell without a moment's notice, with the result that Lowe barely escaped, while his partner, Melley, was killed. The investigation showed the miners to have been very much at fault in not standing props when they knew them to be necessary for their own safety. Lowe testified that Melley was at the face ten minutes before he was, because he was detained by loading the car. He reached the face about three minutes before the fall took place. He was working about nine feet from the buggy, while Melley was between the buggy and the stump. There was a shot in one of the neighboring breasts, and piece dropped from the top. He said, I called to Melley to look out, and I ran for safety, thinking my partner was in advance of me, and in fact, out of danger before me, until after the fall, when I found he was caught, and from the position in which we found him it was evident that he had fallen in trying to escape. I feel satisfied that had we given the proper attention to propping, the accident would not have occurred, but we believed the top safe. I had examined the roll and sounded the top in the morning. I also asked Melley to sound it. He took the drill and sounded it a little, and appeared to be satisfied as long as I thought it safe. The mistake we made was in not having props put in, but we never asked for props, but if I was sure that the piece I heard did fall from the top, we could have both been safe, with a minute to spare." The responsibility for this accident is plain after reading the testimony of Lowe, but it should be a lesson to all miners in the future with regard to propping.

No. 56. Michael Stever, a miner, employed at Beaver Meadow colliery, No. 2 slope, was fatally injured on November 27. He was working in breast No. 95. At this point the breast was flat, necessitating the use of a buggy. Assistant Foreman, William Sachs, visited the breast on the afternoon of the 25th, and found the clod in a dangerous condition. He ordered Stever to take it down, giving him powder for that purpose. He drilled a hole and fired it, and when asked by the foreman if he had taken it all down replied, "No," that he was going to drill another hole in it, but instead of doing so, he commenced to drill a hole in the bottom, and while thus engaged, the



clod fell, inflicting such injuries as to result in death while he was being removed to the gangway. A careful examination of the place, together with the testimony of those first to appear after the accident, showed that the victim was alone responsible for starting a hole in the bottom before he had completed the work of taking down the clod, after commencing to do so, but this is becoming a common error with the miner. This man knew better, for he had several years experience as a miner.

No. 57. Benjamin Solt, fireman, employed at Cranberry No. 4 slope, was fatally injured on December 3. He was working as a fireman, and attended to boiler of fan engine. He was found lying semi-conscious between the partition of the boiler house and the boiler fan engine. Edward Winters, engineer, was the first on the scene, but was unable to obtain from the victim a statement of how it occurred. The investigation showed that the victim, while oiling the fan engine, carelessly moved about the running parts of the machinery, and in trying to pass between the moving belts, was caught and thrown against the belt pulley with such force as to fracture his skull. His leg striking the side of the building resulted in the fracture of that member also.

No. 58. Frank Gallagher, slate picker, employed at Highland colliery No. 2, was fatally injured on December 7, and died at the Hazleton Hospital on the same day. This accident occurred at the noon hour, and the boy was not injured while in the discharge of his duty. Three cars and two trucks of timber stood at the head of the slope to be sent inside during the noon hour, and while the cars were being taken over the bridge, the boy, Gallagher, attempted to pass through a space of eighteen inches between the first car and truck, when the cars came together, crushing him with the aforesaid result. Investigation showed that he had no business in that section of the colliery, and had no occasion to pass between cars, as he could have readily gone around them.

No. 59. John Perambo, laborer, employed at Lansford shaft, No. 9 colliery, was instantly killed on December 24, by falling down a shaft 237.5 feet. He was employed as helper to the top man at top of the shaft. He and the top man had taken the loaded bucket on the truck out to the bank. On returning, the top man was on the front end of the truck driving the mule, making a fly of the truck into the head of the shaft. Perambo was on the rear end of the truck, using a sprag as a brake on the wheel, which failed to control the speed of the truck, which passed over the stop blocks, jerking the truck so that Perambo lost his balance and fell from the truck into the shaft. A careful examination, together with the testimony of witnesses, proved beyond question that this accident could have been averted had the top-man taken the usual precautions in taking the

truck in to the head of the shaft, instead of resorting to the reckless method of flying the truck, as they did. Therefore, in my opinion, the top-man and his assistant were jointly responsible for the accident.

No. 60. John Oswallow, a miner employed at Cranberry colliery No. 1, north section, was fatally injured on December 27, and died shortly after being admitted to the Hazleton Hospital. He was a miner of seven years experience, but unfortunately, while barring clod down, he slipped and was caught by it. A careful examination of the breast, together with the testimony of witnesses, showed that it was a hazardous piece of work to take down the clod, owing to the pitch of the breast, which required the skill of the most experienced miner. He had been told by Assistant Foreman Miller that the top was bad, and he commenced to bar it down, taking every precaution for his own safety, when he slipped in the direction of the falling clod, by which he was injured. This, in my opinion was an unavoidable accident.

TABLE I—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Fifth Anthracite District for the Year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	F. O. Address.	Railroad to Mine.
<b>A. Pardee &amp; Co.</b>						
Cranberry.	Luzerne.	Frank Pardee.	Hazleton.		Hazleton.	Lehigh Valley Railroad.
East Crystal Ridge.	Luzerne.	Frank Pardee.	Hazleton.		Hazleton.	Lehigh Valley Railroad.
<b>Cove Bros. &amp; Co., Inc.</b>						
Driftton No. 1.	Luzerne.			L. C. Smith.	Driftton.	D. S. & S. R. R.
Driftton No. 2.	Carbon.			L. C. Smith.	Driftton.	D. S. & S. R. R.
Edley, including Luck Mt.	Luzerne.			L. C. Smith.	Driftton.	D. S. & S. R. R.
Stockton.	Luzerne.			L. C. Smith.	Driftton.	D. S. & S. R. R.
Beaver Meadow.	Luzerne.			L. C. Smith.	Driftton.	D. S. & S. R. R.
Tomhooken.	Luzerne.			L. C. Smith.	Driftton.	D. S. & S. R. R.
Derringer and Gowan.	Luzerne.			L. C. Smith.	Driftton.	D. S. & S. R. R.
<b>Lehigh Coal &amp; Navigation Co.</b>						
Colliery No. 1.	Carbon.	W. D. Zehner.	Lansford.			C. R. R. of N. J.
Colliery No. 4.	Carbon.	W. D. Zehner.	Lansford.			C. R. R. of N. J.
Colliery No. 5.	Carbon.	W. D. Zehner.	Lansford.			C. R. R. of N. J.
Colliery No. 6.	Carbon.	W. D. Zehner.	Lansford.			C. R. R. of N. J.
Colliery No. 9.	Carbon.	W. D. Zehner.	Lansford.			C. R. R. of N. J.
Screen building.	Carbon.	W. D. Zehner.	Lansford.			C. R. R. of N. J.
<b>G. B. Markle &amp; Co.</b>						
Jeddo No. 4 and Elbervale.	Luzerne.	John Markle, Managing partner.	Jeddo.	W. H. Smith, Jr., General Superintendent.	Jeddo.	Lehigh Valley Railroad.
Highland No. 5.	Luzerne.	do.	Jeddo.		Jeddo.	Lehigh Valley Railroad.
<b>A. S. Van Wickle Estate.</b>						
Milnesville.	Luzerne.	Frank Pardee, Mgr.	Hazleton.	John Harvey.	Milnesville.	Pennsylvania Railroad.
Coleraine and Evans.	Carbon.	Frank Pardee, Mgr.	Hazleton.	John Harvey.	Milnesville.	P. R. R. & L. V. R. R.
<b>Lehigh Valley Coal Co.</b>						
Hazleton No. 1.	Luzerne.	D. Warriner.	Wilkes-Barre.	F. E. Zerbey.	Hazleton.	Lehigh Valley Railroad.
Hazleton No. 2.	Luzerne.	D. Warriner.	Wilkes-Barre.	F. E. Zerbey.	Hazleton.	Lehigh Valley Railroad.
Spring Brook.	Carbon.	D. Warriner.	Wilkes-Barre.	F. E. Zerbey.	Hazleton.	Lehigh Valley Railroad.
<b>Calvin Pardee &amp; Co.</b>						
Lattimer colliery.	Luzerne.	A. W. Drake.	Lattimer.	C. Pardee, Jr.	Lattimer.	D. S. & S. R. R.
Lattimer washery.	Luzerne.	A. W. Drake.	Lattimer.	C. Pardee, Jr.	Lattimer.	D. S. & S. R. R.
Lattimer stripping.	Luzerne.	A. W. Drake.	Lattimer.	C. Pardee, Jr.	Lattimer.	D. S. & S. R. R.
Harwood colliery.	Luzerne.	A. W. Drake.	Lattimer.	C. Pardee, Jr.	Lattimer.	D. S. & S. R. R.
Harwood stripping.	Luzerne.	A. W. Drake.	Lattimer.	C. Pardee, Jr.	Lattimer.	D. S. & S. R. R.

Upper Lehigh Coal Co.	Luzerne,.....	A. C. Lelsenring,...	Upper Lehigh, .....	George Wilmot, .....	Upper Lehigh, .....	C. R. R. of N. J.
Upper Lehigh, .....	Luzerne,.....	E. L. Bullock, .....	Beaver Brook, .....	.....	.....	L. V. R. R. & C. R. R. of N. J.
C. M. Dodson & Co.	Luzerne,.....	M. S. Kemmerer,...	Mauch Chunk, .....	George D. Kugler, ..	Sandy Run, .....	C. R. R. of N. J.
M. S. Kemmerer & Co.	Luzerne,.....	John S. Wentz,.....	.....	George Richert, .....	Hazle Brook, .....	Lehigh Valley Railroad.
J. S. Wentz & Co.	Luzerne,.....	W. J. Richards,.....	Wilkes-Barre, .....	George B. Hadesty,...	Audenreid, .....	C. R. R. of N. J.
Hazle Brook, .....	Luzerne,.....	W. R. McTurk, ....	Philadelphia, .....	W. J. Heiser, .....	Audenreid, .....	Lehigh Valley Railroad.
Lehigh & Wilkes-Barre Coal Co.	Carbon,.....	W. R. McTurk, ....	Philadelphia, .....	W. J. Heiser, .....	Audenreid, .....	C. R. R. of N. J.
Tresckow No. 2, .....	Luzerne,.....	James Rowe, .....	Beaver Meadow,....	.....	.....	Lehigh Valley Railroad.
Audenreid Coal Co.	Luzerne,.....	James Rowe, .....	Beaver Meadow,....	.....	.....	Lehigh Valley Railroad.
Stockton washery, .....	Luzerne,.....	T. R. Reese, .....	Audenreid, .....	.....	.....	Lehigh Valley Railroad.
Tresckow washery, .....	Luzerne,.....	.....	.....	.....	.....	.....
Black Creek Coal Co.	Luzerne,.....	.....	.....	.....	.....	.....
Rowe colliery, .....	Luzerne,.....	.....	.....	.....	.....	.....
Hartleigh, .....	Luzerne,.....	.....	.....	.....	.....	.....
Evans & Reese Coal Co.	Luzerne,.....	.....	.....	.....	.....	.....
Dusky Diamond, .....	Luzerne,.....	.....	.....	.....	.....	.....









TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.		Horse power.	Steam.	Air.							
A. Pardee & Co., .....	Luzerne	51	1,530	22	2,770	4,260	10	.....	39	3,595	15	23,100	7,690	.....	1
Coxe Brothers & Co., Inc., .....	Luzerne	111	4,482	54	7,939	9,811	18	6	88	4,798	58	31,246	31,246	6	.....
Lehigh Coal and Navigation Co., .....	Carbon	43	722	56	7,939	8,931	22	.....	88	4,188	8	14,750	7,375	1	.....
G. B. Markle & Co., .....	Luzerne	54	1,875	28	4,410	6,121	11	.....	83	4,268	6	5,506	3,321	2	.....
Lehigh Valley Coal Co., .....	Luzerne	82	1,720	33	4,860	6,680	14	.....	48	5,600	15	20,360	8,800	2	.....
Calvin Pardee & Co., .....	Luzerne	38	1,720	21	2,290	3,050	12	.....	72	4,620	9	5,815	2,880	1	.....
A. S. Van Winkle Estate, .....	Luzerne	78	1,193	46	3,660	4,853	8	.....	70	2,855	14	12,747	5,774	1	.....
Upper Lehigh Coal Co., .....	Luzerne	66	1,499	6	595	2,585	6	.....	57	1,335	17	19,100	7,800	.....	.....
C. M. Dodson & Co., .....	Luzerne	48	980	8	800	1,760	1	.....	19	800	8	8,000	4,000	1	.....
M. S. Kemmerer & Co., .....	Luzerne	22	880	3	260	1,780	2	.....	10	431	6	3,680	2,400	.....	.....
J. S. Wentz & Co., .....	Carbon	20	1,000	3	175	1,175	2	.....	17	400	6	3,600	2,400	.....	.....
Lehigh and Wilkes-Barre Coal Co., .....	Luzerne	12	588	1	50	1,050	1	.....	2	260	3	3,692	991	.....	.....
Audensand Coal Co., .....	Luzerne	.....	.....	5	260	260	.....	.....	21	626	3	3,000	800	.....	.....
Black Creek Coal Co., .....	Luzerne	.....	.....	5	260	260	.....	.....	2	140	.....	.....	.....	.....	.....
Evans & Reese, .....	Luzerne	.....	.....	1	90	90	.....	.....	1	40	.....	.....	.....	.....	.....
Total and average, .....		646	21,600	291	30,933	52,458	107	11	554	32,731	157	153,561	85,587	15	23



TABLE III—Showing the number of each class of employees at each colliery in the Fifth Anthracite District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside outside.		
		Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.									
		Inside foreman or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and help-ers.	All other employees.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.		Total outside.	
A. Pardee & Co.																		
Cranberry.....	Luzerne.....	3	5	509	149	57	38	57	618	1	24	27	69	2	191	314	932	
East Crystal Ridge.....	Luzerne.....	1	1	41	50	16	5	8	122		4	7		17	17	28	150	
Total and average.....		4	6	350	199	73	43	65	740	1	28	34	69	2	208	342	1,082	
Coxe Brothers & Co., Inc.																		
Drifton Nos. 1 and 2.....	Luzerne.....	3	1	115	14	24	7	124	318	1	37	28	90	12	291	459	777	
Eckley and Buck Mountain.....	Luz. & Carbon.....	1		83	6	17	7	72	186	1	8	24	32	1	81	210	396	
Stockton.....	Luzerne.....	1		45	2	6	2	24	81	1	1	13		1	12	39	111	
Beaver Meadow.....	Carbon.....	1		85	40	17	4	82	269	1	10	19	188	1	95	269	438	
Conitoken.....	Luzerne.....	1		33	2			2	35					2	3	3	26	
Derringer and Gowan.....	Luzerne.....	1		198	44	36	12	100	383	1	17	21	90	1	119	249	642	
Total and average.....		9	2	572	108	102	32	404	1,239	5	73	107	410	17	693	1,215	2,454	
Lehigh Coal and Navigation Co.																		
Colliery No. 1.....	Carbon.....	3	7	121	47	30	16	110	331	2	10	42	87	1	105	247	581	
Colliery No. 4.....	Carbon.....	1	3	52	40	28	8	100	232	1	4	21	78		48	152	384	
Colliery No. 5.....	Carbon.....	1	3	44	28	13	8	96	193	1	6	14	76		56	153	346	
Colliery No. 6.....	Carbon.....	1	2	63	61	17	10	115	289	1	6	12			24	43	312	
Colliery No. 9.....	Carbon.....	3	4	103	162	25	9	167	413	1	19	27	82		71	191	564	
Screen building.....	Carbon.....									1	11	25	192		107	336	536	
Total and average.....		9	19	383	338	113	51	588	1,501	7	47	141	515	1	411	1,122	2,623	
G. B. Markle & Co.																		
Jeddo No. 4 and Ebersvale.....	Luzerne.....	6		310	378	94	21	72	881	1	5	10	101	11	138	266	1,147	
Highland No. 2.....	Luzerne.....	3	3	197	217	55	13	33	521	1	3	11	84	11	113	223	714	
Highland No. 5.....	Luzerne.....	3		144	170	40	12	31	409	1	3	8	25		89	137	537	
Total and average.....		12	3	651	765	189	46	136	1,802	3	11	29	210	33	340	626	2,428	

A. S. Van Wickle Estate.													
Minesville,	1	128	98	19	2	71	314	1	16	29	58	6	101
Coleraine and Evans,	4	214	192	40	1	40	462	2	25	48	83	8	208
Total and average,	5	312	290	59	3	111	811	2	41	77	171	14	427
Lehigh Valley Coal Co.													
Hazleton No. 1,	3	4	579	32	6	117	517	1	14	18	70	5	112
Lattimer No. 1,	4	4	535	39	12	145	820	1	18	22	58	6	109
Spring Brook,	1	1	4	5	3	3	8	1	5	15	19	1	51
Spring Mountain,	2	1	71	5	25	25	101	1	18	29	14	2	77
Total and average,	10	9	745	76	18	290	1,516	4	55	91	101	14	409
Calvin Fardoe & Co.													
Lattimer colliery,	8	1	63	31	19	143	274	2	26	21	70	11	124
Lattimer washing,	1	1	11	12	1	48	73	1	2	20	18	2	27
Lattimer stripping,	3	2	290	69	10	50	430	3	27	35	109	4	105
Harwood colliery,	1	2	65	2	1	68	68	3	3	6	1	3	36
Harwood stripping,	11	3	276	102	20	221	845	17	55	80	179	15	440
Total and average,	2	3	100	42	44	1	261	2	17	41	59	7	177
Upper Lehigh colliery,													
C. M. Dodson & Co.	1	2	80	23	11	39	252	1	13	22	58	5	89
Beaver Brook,	1	53	63	10	3	12	142	1	5	22	58	2	32
M. S. Kemmerer & Co.	2	1	92	31	10	59	235	1	7	29	79	7	132
John S. Wentz & Co.	1	16	12	4	2	35	35	1	4	4	1	1	4
Hazle Brook,	1	15	12	4	2	35	35	1	4	4	1	1	4
Lehigh and Wilkes-Barre Coal Co.	1	15	12	4	2	35	35	1	4	4	1	1	4
Trescow No. 2,	1	15	12	4	2	35	35	1	4	4	1	1	4
Stockton colliery,	1	5	6	3	1	15	15	1	3	4	46	2	78
Trescow washing,	1	4	4	3	1	9	9	1	3	6	52	2	83
Total and average,	2	9	10	3	2	24	24	2	6	10	98	4	101
Black Creek Coal Co.													
Rowe colliery,	1	5	6	3	1	15	15	1	3	4	46	2	78
Harleigh colliery,	1	4	4	3	1	9	9	1	3	6	52	2	83
Total and average,	2	9	10	3	2	24	24	2	6	10	98	4	101
Evans & Reese.													
Dusky Diamond,	1	1	3	1	1	5	5	1	1	1	1	1	2







TABLE IV.—List of fatal accidents that occurred in and about the Mines of the Fifth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 11	Frank Folwain, .....	Hungarian,	Miner, .....	40	M.	1	1	Beaver Brook, .....	Luzerne,...	Instantly killed by a fall of coal at face of breast in Lykens vein.
12	Mike Masholock, .....	Pole, .....	Miner, .....	35	S.	...	...	Hazleton No. 5, ....	Luzerne,...	Fatally injured by a fall of slate in a breast due to an unforeseen slip.
12	Fred. Guiderjohn, .....	German, ....	Miner, .....	57	M.	1	1	East Crystal Ridge, .....	Luzerne,...	Fatally injured by a rush of coal at face of breast in Parlor vein.
18	Alex. Mickaloski, .....	Pole, .....	Miner, .....	22	M.	1	1	Hazleton No. 1, .....	Luzerne,...	Fatally injured by the explosion of dynamite in the saltpetre powder in the breast cross-cut.
23	Joseph Hydock, .....	Hungarian,	Laborer, .....	21	M.	1	1	Upper Lehigh, .....	Luzerne,...	Instantly killed by a shale of top rock falling upon him while engaged with his minor laying track across a breast.
Feb. 4	Richard Williams, .....	American, ..	Patcher .....	18	S.	...	...	Upper Lehigh, .....	Luzerne,...	Skull fractured; squeezed between mule and mine car on the gangway.
4	John Kaslika, .....	Hungarian,	Outside hitcher.	30	M.	1	1	Coleraine, .....	Carbon,....	Instantly killed; crushed between mine cars at foot of rock plane on the surface.
6	Charles Howis, .....	American, ..	Jig tender, ...	17	S.	...	...	Stockton, .....	Luzerne,...	Fatally injured; caught by main driving shaft in the breaker.
7	Andrew Sochrell, .....	Hungarian,	Pump man, ...	42	M.	1	1	Beaver Meadow st' Carbon,....	Carbon,....	Instantly killed while dumping a car of slate at the breaker.
11	Mike Edwinskey, .....	Pole, .....	Laborer, .....	32	S.	...	...	Jeddo No. 4, .....	Luzerne,...	Instantly killed; squeezed between a mine car and temporary gangway leg.
11	Patrick Gallagher, .....	Irish, .....	Motor runner, ..	24	S.	...	...	Highland No. 5, ....	Luzerne,...	Instantly killed; crushed between derailed motor and rib.
21	George Faddor, .....	Slav, .....	Miner, .....	42	M.	1	4	Beaver Brook .....	Luzerne,...	Instantly killed by a fall of bony coal at face of breast in Lykens Valley vein.
23	Mike Lukash, .....	Hungarian,	Laborer, .....	37	M.	1	3	East Crystal Ridge, .....	Luzerne,...	Instantly killed; crushed between a loose rock and a gangway collar.
March 2	John Pango, .....	Hungarian,	Miner, .....	22	S.	...	...	Hazleton No. 5, ....	Luzerne,...	Instantly killed by a fall of slate at face of breast.

2	Martin Shafanie, .....	German, .....	Miner, .....	27	S. ....	Hazleton No. 3, .....	Luzerne, ...	Fatally injured while running along the gangway; he stumbled over a miners' nrello, the point penetrating his nrello.
2	Andrew Podesin, .....	Hungarian, .....	Itelairman, ..	42	M. 1 ....	Hazleton No. 8, .....	Luzerne, ...	Killed by a runaway car while repairing tracks at foot of No. 8 shaft.
6	John Jczetewicz, .....	Hungarian, .....	Laborer, .....	27	S. ....	Cranberry, .....	Luzerne, ...	Killed by a fall of slate at face of breast in the Parlor vein.
8	John Henry Richards, .....	American, .....	Fireman, .....	27	M. 1 ....	Nesquehoning shaft, .....	Carbon, ....	Fatally injured; run down by locomotive in the gangway.
13	Jacob Doman, .....	Pole, .....	Miner, .....	28	M. 1 ....	East Crystal Ridge, .....	Luzerne, ...	Killed while riding along the gangway in an empty car.
2	Mike Fasdon, .....	Italian, .....	Laborer, .....	25	M. 1 ....	Hazleton No. 5, .....	Luzerne, ...	Killed by fall of a bench of top coal at face of breast in Buck Mountain vein.
11	Andrew Bere, .....	Hungarian, .....	Miner, .....	44	M. 1 ....	Evans colliery, .....	Carbon, ....	(Both instantly killed by a premature explosion of dynamite.
12	John Salke, .....	Hungarian, .....	Laborer, .....	21	S. ....	Hazleton No. 5, .....	Luzerne, ...	Fatally injured; struck by a piece of coal thrown by a shot.
13	Eugene Gabour, .....	German, .....	Bratticemen, ..	27	S. ....	Coleraine, .....	Carbon, ....	Killed, squeezed between a slate truck and a runaway car of breaker.
13	George Pado, .....	Hungarian, .....	Leader, .....	20	S. ....	.....	Carbon, ....	Fatally injured by a fall of coal and slate in a breast.
13	Baptista Clauser, .....	Austrian, .....	Miner, .....	31	S. ....	Gowan Nos. 1 and 3, .....	Luzerne, ...	Fatally injured; run down by slate truck under breaker.
18	John McCarvey, .....	American, .....	Slate picker, ..	14	S. ....	Spring Mountain, .....	Carbon, ....	Killed by a fall of slate in the gangway.
29	John Shewick, .....	Pole, .....	Miner, .....	37	M. 1 ....	Hazleton No. 3, .....	Luzerne, ...	Instantly killed; crushed between rib of gangway and derailed air motor.
11	James M'G, .....	American, .....	Patcher, .....	18	S. ....	Highland No. 5, .....	Luzerne, ...	Killed by a rock falling upon him at face of gangway.
17	Ignatius Zubiek, .....	Hungarian, .....	Laborer, .....	32	M. 1 ....	Leansford, .....	Carbon, ....	Fatally injured by fall of clod at face of breast.
17	Miko Mochnotch, .....	Hungarian, .....	Miner, .....	46	M. 1 ....	Beaver Brook, .....	Luzerne, ...	Fatally injured; squeezed between mine car and locomotive near breaker.
23	Frank Harrit, .....	Hungarian, .....	Laborer, .....	54	M. 1 ....	Derringer, .....	Luzerne, ...	Killed by the premature explosion of dynamite while tampering the same.
25	Joseph Kowolski, .....	Pole, .....	Miner, .....	42	M. 1 ....	Hazleton No. 5, .....	Luzerne, ...	Killed by a fall of coal and slate at face of breast.
25	George Vasholski, .....	Hungarian, .....	Laborer, .....	28	S. ....	Jeddo No. 4, .....	Luzerne, ...	Killed by a fall of coal and slate at face of breast.
1	Thos. Moman, .....	American, .....	Driver, .....	19	S. ....	Nesquehoning No. 1, .....	Carbon, ....	Fatally injured by a fall of rock; while preparing a prop the rock fell.
2	Otto Erien, .....	Pole, .....	Miner, .....	56	M. 1 ....	Hazleton No. 1, .....	Luzerne, ...	(Both killed by a rush of coal after a shot.
6	Mike Remack, .....	Slav, .....	Miner, .....	52	M. 1 ....	Jeddo No. 4, .....	Luzerne, ...	Killed by a fall of clod near the face of breast in No. 3 Buck Mountain vein.
6	Andrew Chipps, .....	Slav, .....	Miner, .....	38	M. 1 ....	Jeddo No. 4, .....	Luzerne, ...	Fatally injured by a premature blast in a breast in Buck Mountain vein.
29	Samuel Rupert, .....	American, .....	Miner, .....	28	M. 1 ....	Gowan No. 4, .....	Luzerne, ...	Killed by a fall of coal and slate at face of breast while barring after a shot.
11	Joseph Jacquet, .....	French, .....	Miner, .....	60	M. 1 ....	Highland No. 5, .....	Luzerne, ...	Instantly killed by a fall of rock in a breast, due to the carelessness of this miner.
16	John T-wador, .....	Hungarian, .....	Miner, .....	35	M. 1 ....	Beaver Brook, .....	Luzerne, ...	Fatally injured by a fall of clod while robbing pillars.
7	Lewis Yellon, .....	Hungarian, .....	Laborer, .....	36	M. 1 ....	Ebervale, .....	Luzerne, ...	Killed by a fall of rock.
11	John Stachura, .....	Hungarian, .....	Miner, .....	25	M. 1 ....	Beaver Brook, .....	Luzerne, ...	
11	Metro Bublisky, .....	Slav, .....	Miner, .....	33	M. 1 ....	Evans colliery, .....	Carbon, ....	

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
15	Stephen Singley.	American.	Laborer.	38	M.	1	6	Cranberry.	Luzerne.	Fatally injured: struck by a piece of coal while crossing the foot of breaker plane.
22	Peter Oleckey.	Pole.	Loader.	30	M.	1	1	Lansford No. 4.	Carbon.	Killed by returning too soon to what he supposed to be a miss shot.
24	Constanta Kikanski.	Pole.	Miner.	32	M.	1	2	Hazleton No. 1.	Luzerne.	Fatally injured by a fall of clod at face of breast.
24	Frank Ball.	Pole.	Laborer.	23	S.	.....	.....	Cranberry No. 1.	Luzerne.	Fatally injured: pelvis fractured by a fall of clod in a breast.
28	Joseph Yarasinski.	Pole.	Laborer.	19	S.	.....	.....	Harwood.	Luzerne.	Killed by a fall of clod at face of breast, due to the carelessness of his miner.
28	Albert Fox.	American.	Miner.	22	S.	.....	.....	Gowan Nos. 1 and 3.	Luzerne.	Instantly killed by a fall of top coal at face of breast.
Nov. 15	John Sivar.	American.	Patcher.	20	S.	.....	.....	Harwood.	Luzerne.	Fatally injured: crushed between cars and locomotive on the surface.
18	William Shellala.	Russian.	Miner.	41	M.	1	4	Cranberry No. 4.	Luzerne.	Killed by a fall of rock while perambulating about an abandoned section of workings.
19	John Toniola.	Tyrolean.	Miner.	36	M.	1	3	Cranberry No. 1.	Luzerne.	Killed by a fall of coal at face of breast in Gowan No. 1.
21	Watkin Williams.	American.	Miner.	48	M.	1	1	Hazleton No. 1.	Luzerne.	Killed by a fall of clod near face of breast in Buck Mountain vein.
21	George Argust.	American.	Repairman.	18	S.	.....	.....	Hazleton No. 40 B.	Luzerne.	Fatally injured by falling from egg coal slate conveyor line to the tracks under the breaker.
22	Dennis Melley.	Irish.	Miner.	46	M.	1	1	Highland No. 5.	Luzerne.	Killed by a fall of rock in a breast while employed at robbing pillars.
27	Mike Stever.	Hungarian.	Miner.	40	M.	1	4	Beaver Meadow.	Carbon.	Killed by a fall of clod in breast.
3	Benjamin Solt.	American.	Fireman.	45	M.	1	2	Cranberry No. 4.	Luzerne.	Fatally injured by moving recklessly about a fan engine.
7	Frank Gallagher.	American.	Slate picker.	14	S.	.....	.....	Highland No. 2.	Luzerne.	Fatally injured: squeezed between timber cars on top of slope.
24	John Perambo.	Pole.	Laborer.	26	S.	.....	.....	Lansford No. 9 shaft.	Carbon.	Killed by a fall of clod in a breast.
27	John Oswallow.	Pole.	Miner.	30	S.	.....	.....	Cranberry.	Luzerne.	Killed by a fall of clod in a breast.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Fifth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 3	Harry Miller.	American.	Dumper.	63	M.	Evans colliery.	Carbon.	Shoulder bone fractured by falling.
	Wm. Blanchfield.	American.	Car runner.	37	M.	Coltraine.	Carbon.	Leg fractured while attempting to uncouple cars.
16	James Thompson.	American.	Miner.	37	M.	Jeddo No. 4.	Luzerne.	Severely injured by an explosion of powder.
18	Felix Palrock.	Hungarian.	Miner.	30	S.	Highland No. 2.	Luzerne.	Leg fractured by a fall of slate.
18	Obineto Sugese.	Italian.	Driver.	32	S.	Lattimer stripping.	Luzerne.	Hip dislocated by falling from a mule.
19	Benj. Duffy.	American.	Hitcher.	30	S.	Sandy Run.	Luzerne.	Both legs fractured; crushed between mine cars.
19	Andrew Rintka.	Hungarian.	Dumper.	40	M.	Hazle Brook.	Luzerne.	Painfully injured; squeezed between mine car and side of breaker.
23	Joseph Edwards.	Welsh.	Miner.	.....	M.	Lansford No. 9.	Carbon.	Leg fractured by a piece of coal falling from the rib of chute.
24	John Dubroski.	Austrian.	Miner.	43	M.	Spring Brook.	Carbon.	Contused back by a fall of coal.
Feb. 1	Robert Wisley.	American.	Door boy.	17	S.	Nesquehoning No. 1.	Carbon.	Leg fractured; squeezed between a boom-tive and a door frame.
1	Joseph Harmotta.	Hungarian.	Outside loader.	.....	M.	Derringer.	Luzerne.	Ribs fractured; squeezed between car and breaker.
11	Tony Stansel.	Italian.	Laborer.	22	S.	Hazleton shaft breaker.	Luzerne.	Skull fractured; squeezed between a car and breaker timber.
12	Augustus Zimmerman.	American.	Miner.	31	M.	Highland No. 5.	Luzerne.	Eye injured by a flying piece of coal.
18	Samuel Houser.	American.	Laborer.	18	S.	Nesquehoning.	Carbon.	Arm fractured while unloading a car on culm bank.
19	Thos. McGill.	Irish.	Miner.	56	S.	Sandy Run.	Luzerne.	Leg fractured by premature blast.
25	Joseph Howak.	Hungarian.	Laborer.	30	S.	Lansford No. 4.	Carbon.	Burned by an explosion of gas.
26	John Sigow.	Slav.	Laborer.	24	S.	Highland No. 5.	Luzerne.	Back injured by a fall of rock.
28	John Sharkey.	Irish.	Miner.	38	S.	Lattimer, G slope.	Luzerne.	By an explosion of dynamite while tampering a hole in the top rock. Sharkey had his right hand blown off and eye injured; thoracic, skull fractured; Danl, eyes injured.
28	Veto Tuorella.	Italian.	Laborer.	31	M.	Lattimer, G slope.	Luzerne.	Leg fractured by falling into conveyor at the breaker.
March 6	Simon Diamatro.	Italian.	Laborer.	18	S.	Harwood.	Luzerne.	Leg fractured by a piece of coal falling and striking his leg.
12	Jacob Brugger.	Austrian.	Miner.	54	M.	Derringer.	Luzerne.	Skull fractured by fall of rock.
13	Phillip Gwydeck.	Hungarian.	Laborer.	35	M.	Hazleton No. 3 stripping.	Luzerne.	Skull fractured by a collision of cars.
16	Michael Murrin.	American.	Laborer.	42	M.	Drifton No. 2.	Luzerne.	Foot crushed; jumping off cars.
18	John Dungo.	American.	Tool carrier.	17	S.	Lattimer No. 3 B.	Luzerne.	



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
April	18 John C. Sowers, .....	American, .....	Driver, .....	16	S.	Lattimer No. 8, .....	Luzerne,...	Skull fractured while attempting to jump on a car.
	19 Gustave Munoso, .....	Italian, .....	Slate picker, .....	14	S.	Lattimer No. 3, .....	Luzerne,...	Arm fractured by falling from a railroad car to the track.
	22 Andrew Zubal, .....	Hungarian, .....	Miner, .....	25	M.	Mithesville, .....	Luzerne,...	Leg fractured while loading a car of rock.
	23 Chas. Miller, .....	Prussian, .....	Supply clerk, .....	35	M.	Hazleton No. 1, .....	Luzerne,...	ribs fractured; squeezed between timber cars.
	24 Peter Lakemere, .....	Pole, .....	Laborer, .....	32	M.	Jocko No. 4, .....	Luzerne,...	Ankle fractured; struck by a piece of rock.
	25 Michael Gogan, .....	Hungarian, .....	Miner, .....	34	M.	Jocko No. 10, .....	Luzerne,...	Leg fractured by a fall of coal.
	26 Frank Carlton, .....	Irish, .....	Driver, .....	24	S.	Highland No. 5, .....	Luzerne,...	Arm fractured; squeezed between mine-cars.
	27 Lewis Martin, .....	Austrian, .....	Miner, .....	25	S.	Bergranger, .....	Luzerne,...	Back and legs injured by a fall of coal.
	28 Louis Brezinsky, .....	Pole, .....	Miner, .....	33	S.	Highland No. 5, .....	Luzerne,...	Legs fractured; squeezed between mine-cars.
	29 Howard Evans, .....	American, .....	Outside loader, .....	24	S.	Colrain, .....	Carbon,...	Leg fractured; caught between cars and car.
May	25 Andrew Oudrys, .....	Hungarian, .....	Miner, .....	31	M.	Lansford No. 4, .....	Carbon,...	Hands and face burned by an explosion of gas in a breast.
	26 Michael Subek, .....	Hungarian, .....	Miner, .....	24	M.	Lansford No. 4, .....	Carbon,...	Struck by pieces of coal thrown from a blast.
	27 Harry Shock, .....	American, .....	Miner, .....	39	S.	Chautauque, .....	Luzerne,...	Internally injured between a piece of rock and battery prop.
	28 Albert Steuber, .....	German, .....	Miner, .....	23	S.	Lansford No. 4, .....	Carbon,...	Head and neck lacerated by premature blast.
	29 Chas. Romanesky, .....	Pole, .....	Laborer, .....	24	S.	Lansford No. 4, .....	Luzerne,...	Leg fractured by a fall of coal.
June	27 Wm. Graham, .....	American, .....	Foreman, .....	35	M.	Beaver Meadow, .....	Luzerne,...	Leg and arm injured by a fall of rock.
	28 Michael Gogan, .....	Hungarian, .....	Laborer, .....	36	M.	Jocko No. 4, .....	Luzerne,...	Leg and arm fractured by falling under-cars.
	29 Chas. Gochachar, .....	Irish, .....	Picker, .....	35	S.	Chautauque, .....	Luzerne,...	Leg fractured by falling while walking through the tunnel.
	30 Paul Richard, .....	American, .....	Miner, .....	35	M.	Hazleton No. 1, .....	Luzerne,...	Foot crushed by a stick of timber falling upon it.
	31 Michael Vandango, .....	Pole, .....	Laborer, .....	24	M.	Chautauque, .....	Luzerne,...	Leg broken by a piece of coal falling from the rib.
July	26 Manus Boyle, .....	American, .....	Laborer, .....	26	....	Ellevale, .....	Luzerne,...	Struck by steam from boiler, due to breaking of the blow-off pipe.
	27 Peter Lemon, .....	Italian, .....	Laborer, .....	50	M.	Coleraine, .....	Carbon,...	Seriously injured by falling between belt and pulley on breaker.
	10 John Staresky, .....	Slav, .....	Jig tender, .....	33	M.	Drifton, .....	Luzerne,...	Shoulder dislocated by falling down a breast mainway.
	11 John Blane Y., .....	American, .....	Miner, .....	26	S.	Mithesville, .....	Luzerne,...	Leg fractured by the breaking of a pulley; the rope struck him.
	12 Thomas Davis, .....	Welsh, .....	Laborer, .....	28	M.	Coleraine, .....	Carbon,...	Skull fractured; squeezed between cars.
20	Lewis Ferdinand, .....	Italian, .....	Laborer, .....	20	S.	Drifton, .....	Luzerne,...	

No.	Sylvester Sims,	American,	Teamster,	90	M. Jeddo,	Luzerne,	Compound fracture of collar bone by falling from a wagon.
20	John Ring,	Hungarian,	Laborer,	M.	Stockton,	Luzerne,	Leg fractured; struck by hoist rope.
21	Stefan Kowalski,	Pole,	Laborer,	29	Stockton,	Luzerne,	Leg fractured by a fall of clod.
22	Fred Haller,	Pole,	Laborer,	25	Hazleton No. 2,	Luzerne,	Shoulder and arm fractured by fall of coal.
23	Mike Sliotta,	Hungarian,	Car runner,	25	Stockton,	Luzerne,	Throat cut off; caught between the bumpers of cars.
28	George Eadie,	Hungarian,	Miner,	51	Beaver Brook,	Luzerne,	Leg fractured while breaking a lump of coal.
28	John Sosack,	Pole,	Laborer,	42	Beaver Brook,	Luzerne,	Hand cut off; struck by a piece of coal.
29	Irvin Gladwick,	German,	Miner,	42	Jeddo No. 4,	Luzerne,	Leg fractured by fall of coal.
30	Stephen Kowesser,	Austrian,	Laborer,	23	Hazleton No. 5,	Luzerne,	Leg fractured by a fall of coal.
31	Joseph Fabian,	Hungarian,	Miner,	25	Hazleton No. 2,	Luzerne,	Leg fractured by a fall of coal.
21	Edward Wagner,	American,	Driver,	18	Nesquehoning shaft,	Carbon,	Leg fractured; caught between car and door frame.
23	Mike Durcovic,	Hungarian,	Miner,	37	M. Coleraine,	Carbon,	Hips badly contused; squeezed between a car and people.
24	John Royack,	Hungarian,	Miner,	40	Coleraine,	Carbon,	Lacerated scalp by a fall of coal.
24	Mike Onda,	Hungarian,	Laborer,	24	Coleraine,	Carbon,	Shoulder bone fractured by a fall of coal.
25	Chas. F. Frasher,	American,	Outside foreman,	33	Spring Brook,	Carbon,	Leg fractured by mine car on culm bank.
17	Jacob Leisberger,	German,	Miner,	48	Drifton No. 2,	Luzerne,	Leg fractured by fall of slate.
17	John Sundra,	Pole,	Driver,	19	Cranberry,	Luzerne,	Internally injured; squeezed between mine car and rib.
18	William Petrovich,	Lithuanian,	Miner,	29	M. Cranberry,	Luzerne,	Head and arm injured by a piece of coal from a shot.
18	John Yonic,	Hungarian,	Miner,	55	Harwood,	Luzerne,	Contused back by a fall of slate.
19	Frank Kuboski,	Pole,	Miner,	46	Hazleton No. 5,	Luzerne,	Seriously injured by premature explosion of dynamite.
23	John Poshentch,	Hungarian,	Laborer,	19	Beaver Brook,	Luzerne,	Leg fractured by a piece of coal from a shot.
23	Mike Yeager,	Hungarian,	Miner,	44	Jeddo No. 4,	Luzerne,	Knee cap fractured by a fall of slate.
25	Wm. McArille,	American,	Miner,	42	Nesquehoning No. 1 tunne,	Carbon,	Painfully injured while drilling out a missed shot.
26	Andrew Garmiga,	Hungarian,	Patcher,	32	Jeddo No. 4,	Luzerne,	Seriously injured by a fall of clod.
31	Joseph Kimer,	Austrian,	Miner,	20	Derringer,	Luzerne,	Leg fractured while playing on the gangway.
12	John Boyer,	German,	Miner,	21	Hazleton No. 3,	Luzerne,	Leg fractured by a fall of bony coal at foot of breast.
13	John Tade,	Hungarian,	Laborer,	18	Upper Lehigh stripping,	Luzerne,	Leg fractured; squeezed between locomotive and dump car on the stripping.
14	Joseph Fitzgerald,	American,	Sweeper,	17	Beaver Meadow,	Carbon,	Seriously injured; caught by set screw on jig shaft in the breaker.
16	Angelo Dimarco,	Italian,	Laborer,	52	Coleraine,	Carbon,	Leg fractured while dumping a buggy of coal on the stripping.
21	John Pukush,	Hungarian,	Laborer,	26	Beaver Meadow,	Carbon,	Leg fractured by a fall of coal.
16	John McSway,	Hungarian,	Jackman,	39	Coleraine stripping,	Carbon,	Leg fractured by a piece of frozen earth.
16	Noel Boyle,	Irish,	Door boy,	19	Drifton No. 2,	Luzerne,	Leg fractured by a mine car.
15	Nicholas Maneyon,	Italian,	Outside laborer,	38	Hazleton No. 1,	Luzerne,	Leg fractured; while assisting to remove a box from a car; it fell upon his leg.
17	James Boyle,	American,	Pump man,	22	Beaver Meadow,	Carbon,	Leg fractured in jump machinery.
17	Condy J. Gallagher,	American,	Patcher,	22	Upper Lehigh,	Luzerne,	Collar bone fractured; caught between locomotive and while trying to open sand pipe on locomotive.
26	Arthur Rupert,	American,	Patcher,	19	Derringer,	Luzerne,	Spine on locomotive.
31	George Dellich,	Slav,	Laborer,	35	Jeddo No. 4,	Luzerne,	Back contused by falling into manway.



# Sixth Anthracite District.

SCHUYLKILL COUNTY.

Shenandoah, Pa., March 5, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of herewith presenting my annual report as Inspector of Mines for the Sixth Anthracite Coal District for the year ending December, 1901. It contains the usual yearly tabular statements of mine accidents, number of each class of employes, quantity of coal produced and shipped as given by each operator, number of persons employed, number of fatal and non-fatal accidents that occurred in and about the collieries, number of tons of coal produced per life lost, number of tons of coal produced per accident. The report also shows the classification of accidents, occupation of persons killed and injured, and other memoranda as yearly reported.

The report for 1901, shows that there were seventy-three fatal, and 144 non-fatal accidents, an increase of eight fatal and fourteen non-fatal as compared with 1900, still the number of tons produced per life lost for 1901 exceeds that of the year 1900 by 2,768 tons.

Number of tons of coal produced per life lost for the

year 1901, .....	110,777
For the year 1900, .....	108,009

An increase in tons of, .....	2,768
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Production of coal in tons during the year 1901, ....	8,086,320
During the year 1900, .....	7,020,571

An increase in tons of, .....	1,065,749
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Very respectfully,

WILLIAM STEIN,  
Mine Inspector.



TABLE A—Showing the Production of Coal, Number of Persons Employed by Each Company During the Year 1901, and Average Number of Tons Produced per Employee.

Names of Companies.	Number of tons produced.	Number of persons employed.
Philadelphia and Reading Coal and Iron Co., .....	4,571,870.08	11,917
Lehigh Valley Coal Co., .....	795,745	2,236
Lehigh and Wilkes-Barre Coal Co., .....	568,440.16	1,186
Mill Creek Coal Co., .....	437,152.05	706
Lentz & Co., .....	366,388	820
Silver Brook Coal Co., .....	170,352	408
Coxe Brothers & Co., Incorporated, .....	319,729	720
Susquehanna Coal Co., .....	236,516	748
Thomas Coal Co., .....	83,177	277
Lawrence Coal Co., .....	144,111	425
Cambridge Coal Co., .....	53,752	131
Furnace Coal Co., .....	40,138	100
Stoddart Coal Co., .....	55,188	68
Brookwood Coal Co., .....	93,017	138
Girardville Coal Co., .....	21,404	117
Carson Coal Co., .....	26,953	132
North American Coal Co., .....	102,387	55
Total, .....	8,086,320.05	20,277

Average number of tons produced per employee, 398.08.

TABLE B—Number of Fatal Accidents and Tons of Coal Produced per Life Lost.

Names of Companies.	Number of fatal accidents.	Number tons of coal produced per life lost.
Philadelphia and Reading Coal and Iron Co., .....	40	140,296 7-10
Lehigh Valley Coal Co., .....	10	79,574.05
Lehigh and Wilkes-Barre Coal Co., .....	4	142,110
Mill Creek Coal Co., .....	7	65,907
Lentz & Co., .....	1	366,388
Silver Brook Coal Co., .....	2	56,784
Coxe Brothers & Co., Incorporated, .....	1	319,729
Susquehanna Coal Co., .....	1	236,516
Thomas Coal Co., .....	2	41,583.05
Lawrence Coal Co., .....	1	144,111
Cambridge Coal Co., .....	1	53,752
Furnace Coal Co., .....	1	40,138
Stoddart Coal Co., .....	1	55,188
Brookwood Coal Co., .....	1	93,017
Girardville Coal Co., .....	1	21,404
Carson Coal Co., .....	1	26,953
North American Coal Co., .....	3	34,129
Total and average, .....	73	110,771

TABLE C—Number of Fatal and Non-Fatal Accidents and Number of Tons of Coal Produced per Accident.

Names of Companies	Number of accidents.	Number tons of coal produced per accident.
Philadelphia and Reading Coal and Iron Co., .....	127	35,998
Lehigh Valley Coal Co., .....	46	17,683
Lehigh and Wilkes-Barre Coal Co., .....	7	81,205
Mill Creek Coal Co., .....	11	39,741
Lentz & Co., .....	7	52,341
Silver Brook Coal Co., .....	3	56,784
Coxe Brothers & Co., Incorporated, .....	3	106,576
Susquehanna Coal Co., .....	4	59,129
Thomas Coal Co., .....	4	20,794
Lawrence Coal Co., .....	2	144,111
Cambridge Coal Co., .....	2	26,876
Furnace Coal Co., .....	2	40,138
Stoddart Coal Co., .....	2	55,188
Brookwood coal Co., .....	2	93,017
Girardville Coal Co., .....	2	21,404
Carson Coal Co., .....	2	26,953
North American Coal Co., .....	4	25,596
Total and average, .....	217	37,264

TABLE D—Classification of Accidents.

	Killed or fatally injured.	Injured.	Total.
Explosion of gas, .....	4	32	36
Igniting loose powder, .....	3	15	18
By blasts, .....	3	9	12
Drowned by rush of water from old workings, .....	3	1	4
Falling down slopes, .....	3	3	6
By machinery on surface, .....	3	3	6
Falls of coal and rock, .....	29	48	77
Falling under cars, .....	11	15	26
Run over by locomotive, .....	1	1	2
Falling down tramway, .....	2	3	5
Falling down chute, .....	1	1	2
Miscellaneous, inside, .....	6	10	16
Miscellaneous, outside, .....	5	7	12
Total, .....	73	144	217

TABLE E—Occupation of Persons Killed and Injured.

Occupation.	Killed or fatally injured.	Injured.	Total.
Miners, .....	34	89	123
Laborers, .....	16	26	42
Drivers, .....	4	5	9
Starters, .....	1	3	4
Loader boss, .....	1	1	2
Door boy, .....	1	1	2
Repairman, .....	1	1	2
Plane tender, .....	1	1	2
Carpenter, .....	1	1	2
Car loader, .....	1	1	2
Driver, .....	1	1	2
Laborer, .....	7	4	11
Fireman, .....	1	1	2
Machinist, .....	1	3	4
Car runner, .....	1	1	2
Tip man, .....	1	2	3
Locomotive man, .....	3	1	4
Screen tender, .....	1	1	2
Slate picker, .....	1	3	4
Total, .....	73	144	217

TABLE F—Nationalities of Persons Killed and Injured.

	Americans.	English.	Germans.	Welsh.	Irish.	Poles.	Hungarians.	Tyrolean.	Italians.	Lithuanians.	Russians.	Austrians.	Slavs.	Greeks.	Total.
Killed, .....	18	4	1	1	2	28	12	1	3	5	1	1	1	1	73
Injured, .....	36	4	4	9	6	62	5	1	3	11	2	1	1	1	144
Total, .....	54	8	5	10	14	90	17	2	6	16	3	2	2	2	217

Table Showing the Quantity of Coal Produced and Shipped During the Years 1900 and 1901.

	Years.	
	1900.	1901.
Quantity of coal produced in tons, .....	7,020,571.65	8,086,320.05
Quantity of coal shipped, .....	6,053,635.14	7,060,537.04

## Summary of Sixth Anthracite District 1901.

Total production of coal in tons, .....	8,086,320.05
Used for steam and heat, .....	935,220
Sold to local trade and employes, .....	100,563
Shipped by railroad, .....	7,050,537.04
Number of tons produced from washeries which is included in total production, .....	308,847
Average number of days worked, .....	193.5
Number of persons employed, .....	20,277
Number of fatal accidents, .....	73
Number of non-fatal accidents, .....	144
Number fatal accidents, inside, .....	60
Number fatal accidents, outside, .....	13
Number of non-fatal accidents inside, .....	125
Number of non-fatal accidents, outside, .....	19
Number of wives left widows, .....	35
Number of children left fatherless, .....	86
Number of kegs of powder used, .....	162,622
Number of pounds of dynamite used, .....	644,866
Number of horses and mules, .....	2,002
Number of cylindrical steam boilers, .....	446
Number of tubular steam boilers, .....	345
Total horse power of boilers, .....	64,496
Number of pumps, .....	124
Capacity in gallons per minute, .....	116,953
Number of steam engines of all classes, .....	513
Total horse power, .....	50,991
Number of electric dynamos, .....	2
Number of air compressors, .....	18
Steam locomotives, .....	41
Air locomotives, .....	11

## Number of Breakers, Mine Openings, Stripping Pits and Washeries.

Thirty-six breakers are in operation in the district, in connection with which there are fifty-five openings to surface, through which coal is hoisted, and nine stripping pits that supply the breakers with coal. There are also seven washeries.

## Improvements at Collieries.

The improvements under this head are tunnels driven from one seam to another to maintain or increase the present shipments, additional fans erected and the boiler power increased at some collieries.



Hammond colliery operated by the Philadelphia and Reading Coal and Iron Company. The new breaker which was commenced in June, 1901, is now nearing completion, and a new tubular boiler plant has been installed.

At Maple Hill colliery operated by the same company, two high pressure Norwalk air compressors have been installed, which will supply air to two locomotives on shaft level, and one on No. 2 plane, which are expected to do the work of forty mules.

### Mine Fires.

On November 12th a fire was discovered by the fire boss in No. 11 breast, East Mammoth seam, Packer No. 2 colliery, operated by the Lehigh Valley Coal Company. It seemed, on my first visit to the colliery, as though the fire would extend faster into the old "gob" than the workmen could follow it up, and lines of pipe were gotten quickly in position to conduct water to the fire, and a sufficient quantity of air to carry off the gases generated from the fire so as to enable the workmen to get close enough to do efficient work. Openings were made up the sides of pillars on either side of fire and the connected by a cross-heading through the "gob." It was successfully extinguished in nine days. The fire was caused by the night workmen in some way igniting old dry timber while putting up relief timber in gangway. I have frequently suggested the use of Davy or Clanny safety lamps when men are timbering.

On the 5th of September, a fire was discovered in the fifth east level Mammoth seam of the Draper colliery operated by the Philadelphia and Reading Coal and Iron Company. Draper and Gilberton collieries are connected by a tunnel driven across the basin and the water from both collieries is hoisted up Gilberton water shaft. The hoisting of water was stopped until the fire was submerged. The fire originated from a naked lamp used by a driver igniting a pocket of gas above the gangway laggings at a point where the coal is very friable, causing the fire to spread rapidly, which necessitated drowning.

### Examination of Candidates for Mine Foreman's Certificates.

The annual examination for mine foreman's certificates was held in the court house, Pottsville, 5th and 6th June.

The examiners were Thomas F. Downing, Mine Inspector; John C. McGinnis, superintendent; Michael J. Brennan and John Reing, miners.

The following were granted certificates for mine foreman: John R. James, Shenandoah; David R. Roberts, St. Nicholas. Names of those granted a certificate for assistant mine foreman: Hugh F. Boyle, Kelayers; Peter W. McGonigle, Shenandoah; James Weldon, Mahanoy City; Oscar L. Steel, Mahanoy City.

TABLE I—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Sixth Anthracite District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Phila. & Read. Coal & Iron Co.						
Bear Ridge	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Bacon Run.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Elmport.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Elmport.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Grand Wash.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Grand washery.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Gilberton.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Hammond.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Indiana Ridge.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Knickacker.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Kuldmor.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Madison City.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Maple Hill.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
North Mahanoy.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
St. Nicholas.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Suffolk.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Summit.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Summit City.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Turkey Ridge.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
West Shenandoah.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Lehigh Valley Coal Co.						
Packer No. 2.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercur.	Centralla.	Lehigh Valley.
Packer No. 3.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercur.	Centralla.	Lehigh Valley.
Packer No. 4.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercur.	Centralla.	Lehigh Valley.
Packer No. 5.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	F. E. Zerbey.	Centralla.	Lehigh Valley.
Primrose.	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	F. E. Zerbey.	Centralla.	Lehigh Valley.
Silver Brook Coal Co.						
Silver Brook.	Schuylkill.	James Long.	Silver Brook.	James Long.	Silver Brook.	Lehigh Valley.
Coxe Bros. & Co., Inc.						
Oneida Nos. 1, 2 and 3.	Schuylkill.			Luther C. Smith.	Drifton.	Del., Sus. & Schuylkill.
W. R. McTurk & Co.						
Brandywine washery.	Schuylkill.	W. R. McTurk.	320 Walnut street, Philadelphia.	Jas. McConnell.	Gharrville.	Philadelphia and Reading.
Stoddart Coal Co.						
Stoddart washery.	Schuylkill.		Gilberton.	D. H. McGee.	Minersville.	Philadelphia and Reading.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Carson Coal Co. Carson washery, .....	Schuylkill,....	H. E. Rissinger,....	Audenreid, .....	.....	.....	Central R. R. of N. J.
North American Coal Co. Schuylkill No. 1 washery, .....	Schuylkill,....	H. W. Saums, .....	Wilkes-Barre, .....	James I. Sharkey,...	West Pittston, ....	Philadelphia and Reading.
Brookwood Coal Co. Brookwood washery, .....	Schuylkill,....	Henry Myers, .....	Minersville, .....	Wm. Speidel, .....	Frackville, .....	Philadelphia and Reading.
Raven Run, .....	Schuylkill,....	Henry Myers, .....	Minersville, .....	M. E. Jones, .....	Girardville, .....	Philadelphia and Reading.
Lehigh & Wilkes-Barre Coal Co. Audenreid No. 4, .....	Schuylkill,....	W. J. Richards,....	Wilkes-Barre, .....	Geo. B. Hadesky, ....	Audenreid, .....	Central R. R. of N. J.
Honey Brook No. 5, .....	Schuylkill,....	W. J. Richards,....	Wilkes-Barre, .....	Geo. B. Hadesky, ....	Audenreid, .....	Central R. R. of N. J.
Vulcan, .....	Schuylkill,....	T. D. Jones, .....	New Boston, .....	J. Elmer Jones, .....	New Boston, .....	Lehigh Valley.
Buck Mountain, .....	Schuylkill,....	T. D. Jones, .....	New Boston, .....	J. Elmer Jones, .....	New Boston, .....	Lehigh Valley.
Kelly's Run, .....	Schuylkill,....	Thomas Baird,....	Shenandoah, .....	Thos. Baird, .....	Shenandoah, .....	Philadelphia and Reading.
Thomas Coal Co. Cambridge Coal Co. Cambridge, .....	Schuylkill,....	J. C. McGinnis,....	Frackville, .....	J. C. McGinnis, ....	Frackville, .....	Philadelphia and Reading.
Lawrence Coal Co. Lawrence, .....	Schuylkill,....	W. J. Miller, .....	Frackville, .....	W. J. Miller, .....	Frackville, .....	Philadelphia and Reading.
M. A. Gerber & S. A. Saman. Furnace, .....	Schuylkill,....	M. A. Gerber, .....	Tamaqua, .....	M. A. Gerber, .....	Tamaqua, .....	Philadelphia and Reading.
Park No. 2, .....	Schuylkill,....	Wm. O. Lentz,....	Mauch Chunk, ....	Edward Reese, .....	Park Place, .....	Lehigh Valley.
Lentz & Co. Susquehanna Coal Co. William Penn, .....	Schuylkill,....	Morris Williams, ..	Wilkes-Barre, ....	E. A. Rhoads, .....	Shaft P. O., .....	Pennsylvania.

TABLE II—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Sixth Anthracite District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Philadelphia & Reading Coal and Iron Co.												
Beaver Ridge.	Schuylkill.	88,498.16	16,481	2,985	107,508.16	217, 5-20	264	2	1	834	5,199½	41
Bost on Run.	Schuylkill.	141,589	25,719	663	167,373.17	529, 3-20	445	1	3	1,862	41,450	33
Draper.	Schuylkill.	179,118.17	16,065	220	195,273.17	222, 6-50	465	1	3	2,595	30,301½	64
Elliangowan.	Schuylkill.	422,950.07	37,426	559	460,433.07	214, 12-50	1,123	3	1	14,500	3,338	116
Grand Mammoth.	Schuylkill.	49,329.17	18,218	761	68,348.17	164, 10-50	21	1	1	534	3,348	12
Grand washery.	Schuylkill.	10,498.94			10,498.94	49, 18-50	21					
Gilberton.	Schuylkill.	213,500.10	46,375	2,591	262,226.10	212, 11-20	567	4	3	1,568	45,180	57
Hammond.	Schuylkill.	42,330.15	21,826	1,934	66,090.15	70, 17-20	106			1,117	8,688	14
Indian Ridge.	Schuylkill.	295,920.05	19,011	8,694	322,635.05	208, 7-20	680	1	7	5,550	5,104	56
Kittick-florcker.	Schuylkill.	210,692.02	23,636	1,158	235,426.02	223, 19-20	773	2	9	6,772	35,554	56
Kilmour.	Schuylkill.	98,934.06	15,421		114,355.06	169, 11-20	467	1	1	2,337	3,101	48
Madison.	Schuylkill.	206,121.06	48,422	29,210	283,753.06	229, 5-20	606	1	1	5,695	9,371½	63
Marble Hill City.	Schuylkill.	329,212.09	30,718		329,212.09	223, 11-20	1,220	1	5	14,360	14,830	111
North Main way.	Schuylkill.	46,524	26,524	2,581	494,818.08	331, 5-20	961	1	5	8,912	14,993	95
St Nicholas.	Schuylkill.	221,773.12	22,492	2,581	246,846.12	231, 11-20	897	2	7	4,066	21,284	81
Suffolk.	Schuylkill.	231,647.02	22,492	1,262	254,406.02	229, 11-20	897	2	7	3,844	10,315	85
Shenandoah City.	Schuylkill.	213,604.17	40,969	20,903	277,573.17	229, 11-20	897	2	7	3,844	10,315	85
Turkey Run.	Schuylkill.	116,027.07	11,770		127,797.07	167, 14-50	568	3	9	2,234	6,910	53
Tunnel Ridge.	Schuylkill.	312,260.18	53,458		365,727.18	224, 15-20	887	1	12	7,150	26,652	79
West Shenandoah.	Schuylkill.	16,500.10	12,536		29,036.10	28, 7-20	165	1	2	404	847	12
Total.		3,954,830.08	543,881	73,159	4,571,370.08	3,780, 9-20	11,917	40	87	100,945	311,459½	1,151
Lellich and Wilkos-Parre Coal Co.												
Antwield No. 4.	Schuylkill.	230,252.00	27,327	3,100	260,579.01	214.4	598	2	1	5,656	31,490	63
Honey Brook No. 5.	Schuylkill.	264,291.15	43,560		307,761.15	211.5	588	2	2	3,733	61,066	51
Total.		494,543.15	70,887	3,100	568,440.16	213	1,186	4	3	9,389	92,556	104



TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.		Number and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Valley, .....	Schuykill, .....	217,511.17	17,255	.....	.....	234,766.17	235.6	288	4	3	6,844	4,998	40
Buck Mountain, .....	Schuykill, .....	184,600.05	17,885	.....	.....	202,485.08	224.5	408	5	1	5,279	2,604	40
Total, .....	.....	402,012.05	35,140	.....	.....	437,152.65	231.1	796	7	4	12,123	7,602	80
Thomas Coal Co., .....	Schuykill, .....	80,475	1,878	824	.....	83,177	232	277	2	2	1,420	17,550	26
Cambridge, .....	Schuykill, .....	49,664	1,500	3,158	.....	53,752	205.6	124	1	1	1,000	2,200	8
Lawrence, .....	Schuykill, .....	114,913	27,350	1,848	.....	144,111	242	425	.....	.....	125	51,000	39
M. A. Gerber & S. A. Seaman, .....	Schuykill, .....	27,078	3,009	.....	.....	40,138	211 4-10	100	.....	.....	1,120	6,000	9
Furnace, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Park No. 2, .....	Schuykill, .....	257,497	27,778	1,113	.....	266,388	246	820	1	6	7,849	12,550	104
Lentz & Co., .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Susquehanna Coal Co., .....	Schuykill, .....	165,474	28,996	2,046	.....	236,516	185 65-100	748	1	3	6,715	28,500	81
William Penn, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lehigh Valley Coal Co., .....	Schuykill, .....	11,109	16,807	368	.....	28,374	.....	237	.....	7	2,696	7,488½	30
Packer No. 2, .....	Schuykill, .....	107,672	12,524	802	.....	121,058	117.5	364	1	8	2,601	9,147	63
Packer No. 3, .....	Schuykill, .....	394,698	39,415	112	.....	225,225	118.15	565	3	8	800	5,752½	36
Packer No. 4, .....	Schuykill, .....	252,484	32,479	6,045	.....	271,068	220.25	612	4	8	3,866	36,684½	84
Packer No. 5, .....	Schuykill, .....	138,166	8,763	3,161	.....	150,080	156.6	467	2	4	3,833	15,822	77
Prinzee, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	684,129	101,068	10,548	.....	795,745	162½	2,236	10	35	12,876	74,654½	289

Silver Brook Coal Co.	Schuylkill,....	153,852	15,000	1,500	170,352	201.3	408	3	1,598	15,600	32
Silver Brook, .....	Schuylkill,....	262,392	54,485	2,852	319,729	273	720	1	5,821	23,424	69
Coxe Brothers & Co.	Schuylkill,....	20,317	1,007	80	21,404	103 2-10	117	.....	41	1,700	6
Onelda Nos. 1, 2 and 3, .....	Schuylkill,....	50,968	4,220	.....	55,188	211 6-10	68	.....	.....	.....	2
W. R. McTurk & Co.	Schuylkill,....	25,453	1,500	.....	26,953	141	132	.....	.....	.....	8
Girardville washery, .....	Schuylkill,....	99,712	2,670	5	102,387	178	55	3	1	.....	2
Stoddart Coal Co.	Schuylkill,....	49,652	3,000	.....	52,652	162	43	.....	.....	.....	2
Stoddart washery, .....	Schuylkill,....	38,265	1,200	300	39,795	122	37	.....	.....	.....	2
Carson Coal Co.	Schuylkill,....	87,917	4,800	300	93,017	284	138	.....	.....	.....	4
Carson washery, .....	Schuylkill,....	7,050,537.04	935,220	100,563	8,086,320.05	*197	20,277	73	114	102,622	2,002
North American Coal Co.	Schuylkill,....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schuylkill No. 1 washery, .....	Schuylkill,....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brookwood Coal Co.	Schuylkill,....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brookwood washery, .....	Schuylkill,....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Raven Run washery, .....	Schuylkill,....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanton washery, .....	Schuylkill,....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Average

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.								
Philadelphia and Reading Coal and Iron Co.,	Schuylkill.	103	4,896	206	26,720	31,580	15	8	173	28,181	58	64,896	51,200	14	
Lehigh and Wilkes-Barre Coal Co.,	Schuylkill.	13	3,750	14	2,760	5,850	7		21	1,400	3	15,217	7,608	1	
Mill Creek Coal Co.,	Schuylkill.	23	3,250	4	590	3,720	1	2	27	2,910	2	2,000	1,308		
Cambridge Coal Co.,	Schuylkill.	24	720	1		720	1		10	720	2	1,200	1,200		
Lawrence Coal Co.,	Schuylkill.	4	70	1	45	135	1		5	135					
M. A. Gerber & S. A. Seaman.	Schuylkill.			20	3,600	3,000			12	830	5	3,000	2,640		
Lentz & Co.,	Schuylkill.	6	72	3	240	312			1						
Susquehanna Coal Co.,	Schuylkill.	4	160	13	3,250	3,410	2		3	175	3	4,800			
Lehigh Valley Coal Co.,	Schuylkill.	22	640	10	1,250	1,890	1		19	1,380	5	3,000	2,000	1	
Silver Brook Coal Co.,	Schuylkill.	71	2,850	24	4,600	7,450	6		142	10,794	14	8,536	5,836	1	
Coxe Bros. & Co.,	Schuylkill.	8	1,250	1	1,250	1,250	2		15	1,240	6	5,250	5,250		
W. R. McTurk & Co.,	Schuylkill.	24	1,174	13	1,581	2,755	4	1	26	1,800	20	9,000	8,333	1	
Stoddart Coal Co.,	Schuylkill.	3	330	3	255	255			8	233					
Carson Coal Co.,	Schuylkill.	12	330	3	330	330	1		12	172					
North American Coal Co.,	Schuylkill.	4	510	3	700	510			10	280					
Brookwood Coal Co.,	Schuylkill.	4	750	6	750	750			6	280					
Grand total,		446	16,925	245	47,571	64,496	41	11	513	50,991	124	116,933	57,477	2	18

TABLE III.—Showing the number of each class of employees at each colliery in the Sixth Anthracite District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total inside and outside.
		Total inside.										Total outside.							
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Superintendents, bookkeepers and clerks.	All other employees.	Total outside.			
Phila. & Reading Coal and Iron Co.	Schuylkill.....	1	2	25	31	13	2	53	127	1	4	13	43	2	44	107	234		
Bear Ridge, .....	Schuylkill.....	1	3	50	49	23	3	106	235	6	6	24	84	2	92	210	445		
Boston Run, .....	Schuylkill.....	1	6	124	30	26	5	106	298	7	7	17	81	3	99	170	468		
Draper, .....	Schuylkill.....	2	9	305	237	43	13	144	755	3	3	24	204	6	126	370	1,123		
Ellangowan, .....	Schuylkill.....	1	1	35	25	13	2	36	113	1	5	17	38	1	41	103	216		
Girard Mammoth, .....	Schuylkill.....	1	6	103	31	26	5	153	325	8	8	28	98	2	104	242	567		
Girard washery, .....	Schuylkill.....	1	5	8	6	35	7	7	27	6	6	17	146	5	79	106	106		
Gilberton, .....	Schuylkill.....	1	2	151	98	20	9	134	411	5	5	25	146	4	99	286	699		
Hammond, .....	Schuylkill.....	1	3	149	89	20	9	134	411	5	5	25	146	4	99	286	699		
Indian Ridge, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Klickerbocker, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Kohinor, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Mahanoy City, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Maple Hill, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
North Mahanoy, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
St. Nicholas, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Suffolk, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Shenandoah City, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Turkey Run, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Tunnel Ridge, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
West Shenandoah, .....	Schuylkill.....	1	2	170	70	26	18	136	413	6	6	25	146	5	104	302	719		
Total, .....		36	98	2,703	1,489	537	154	2,362	7,409	34	140	391	2,163	53	1,703	4,484	11,893		





Susquehanna Coal Co.	1	5	227	72	29	8	126	472	1	15	34	101	6	119	276	748
William Penn.	Schuylkill.....	1														
Lehigh Valley Coal Co.	Schuylkill.....	1	3	111	32	12	2	34	135	1	14	.....	1	22	42	237
Packer No. 2.	Schuylkill.....	1	4	131	72	26	10	71	315	1	15	.....	1	22	42	264
Packer No. 3.	Schuylkill.....	1	3	78	18	9	2	43	224	1	22	89	1	209	331	505
Packer No. 4.	Schuylkill.....	1	6	161	63	29	4	69	323	1	26	135	3	108	288	643
Packer No. 5.	Schuylkill.....	1	3	128	32	35	6	93	316	1	8	40	3	87	151	467
Primrose.	Schuylkill.....	1														
Total.		5	19	609	237	112	24	329	1,325	5	70	264	12	447	881	2,216
Silver Brook Coal Co.	Schuylkill.....	1	1	28	16	25	4	27	112	3	11	25	3	116	296	478
Silver Brook.	Schuylkill.....	1														
Coxe Bros. & Co., Incorporated.	Schuylkill.....	3	.....	209	37	30	11	110	360	1	11	38	136	1	143	330
Onida Nos. 1, 2 and 3.	Schuylkill.....	1	1	17	12	3	1	5	40	1	7	6	22	2	39	77
W. R. McTurk & Co.	Schuylkill.....	1														
Girardville washery.	Schuylkill.....	1														
Stoddart Coal Co.	Schuylkill.....	1								1	2	7	10	2	30	52
Stoddart washery.	Schuylkill.....	1														
Carson Coal Co.	Schuylkill.....	1								1	4	7	73	2	45	182
Carson washery.	Schuylkill.....	1														
North American Coal Co.	Schuylkill.....	1								1	.....	6	3	2	43	55
Schuylkill No. 1 washery.	Schuylkill.....	1														
Brookwood Coal Co.	Schuylkill.....	1								1	4	6	6	.....	36	42
Brookwood washery.	Schuylkill.....	1								2	4	4	2	.....	25	37
Raven Run washery.	Schuylkill.....	1		13	13	.....			27	2	2	4	.....	25	31	78
Stanton washery.*	Schuylkill.....	1		13	13	.....			27	3	10	14	8	.....	76	111
Total.		61	136	4,787	2,529	331	276	3,379	12,102	63	360	730	3,618	116	3,228	8,155
Grand total and average.																20,217

\*Not shipping yet.



TABLE IV.—List of fatal accidents that occurred in and about the mines of the Sixth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 1	Thomas Pesusky, ..	Pole, .....	Laborer, .....	55	M. 1	1	Cambridge, .....	Schuylkill,	Schuylkill,	Stepped in front of loaded car. Died same day.
5	William Mullahey, ..	American, ..	Laborer, .....	18	S. ....	...	Suffolk, .....	Schuylkill,	Schuylkill,	Arm and foot crushed. Fell of locomotive. Died 7th.
7	Ignace Chicanovitch, ..	Lithuanian, ..	Miner, .....	45	M. 1	2	Vulcan, .....	Schuylkill,	Schuylkill,	Cut on head. Charge exploded. Died 9th.
8	Peter Oloshefskie, ..	Pole, .....	Miner, .....	40	M. 1	4	Packer No. 5, .....	Schuylkill,	Schuylkill,	Broken neck. Walked into counter chute. Died same day.
11	James Williams, ....	American, ....	Driver, .....	21	S. ....	...	Primrose, .....	Schuylkill,	Schuylkill,	Leg crushed by car. Died 12th.
11	Geo. Crawshaw, ....	English, ....	Laborer, .....	52	M. 1	3	Suffolk, .....	Schuylkill,	Schuylkill,	Killed; struck by a car loaded with timber.
14	John Barnhard, ....	American, ....	Breaker boy,...	17	S. ....	...	Oneida, .....	Schuylkill,	Schuylkill,	Foot crushed, leg broken and badly cut. Fell under trip of cars. Died 14th.
15	Evan Williams, ....	Welsh, .....	Miner, .....	50	M. 1	4	Vulcan, .....	Schuylkill,	Schuylkill,	Killed. Piece of bench coal fell on his head.
17	John O'Donnell, ....	Irish, .....	Laborer, .....	22	S. ....	...	North Mahanoy, .....	Schuylkill,	Schuylkill,	Killed. A piece of slate fell from the top.
17	Peter Entwistle, ....	American, ....	Miner, .....	35	S. ....	...	North Mahanoy, .....	Schuylkill,	Schuylkill,	Killed; a piece of slate fell from the top.
19	Michael Perock, ....	Hungarian, ..	Laborer, .....	35	M. 1	1	North Mahanoy, .....	Schuylkill,	Schuylkill,	Fatally injured. A piece of coal fell off the ribs, and knocked him down a chute.
24	Mart Anslavige, ....	Pole, .....	Miner, .....	24	S. ....	...	Packer No. 3, .....	Schuylkill,	Schuylkill,	Killed by fall of coal.
Feb. 1	Thos. Higgins, .....	Irish, .....	Laborer, .....	30	S. ....	...	Bear Ridge, .....	Schuylkill,	Schuylkill,	Killed. A piece of frozen dirt fell on him.
7	Geora Casper, .....	Pole, .....	Miner, .....	27	M. 1	...	Suffolk, .....	Schuylkill,	Schuylkill,	Fatally injured. Fell down manway. Died same day.
13	Thos. Gussie, .....	Hungarian, ..	Laborer, .....	23	S. ....	...	Bear Ridge, .....	Schuylkill,	Schuylkill,	Killed. A piece of frozen bank fell on him.
16	Mike Mullakufskie, ..	Pole, .....	Miner, .....	35	M. 1	3	Gilberton, .....	Schuylkill,	Schuylkill,	A piece of slate fell on him.
17	William Heckman, ....	Dutch, .....	Laborer, .....	49	M. 1	...	Park No. 2, .....	Schuylkill,	Schuylkill,	Caught in machinery.
18	Frank A. Novitsky, ....	Pole, .....	Miner, .....	40	M. 1	2	Ellipton, .....	Schuylkill,	Schuylkill,	Killed by fall of slate.
18	John Scubia, .....	Russian, .....	Laborer, .....	35	M. 1	2	Hony Brook No. 5, .....	Schuylkill,	Schuylkill,	Killed by runaway car.





1	Frank Ross, .....	Italian, .....	Laborer, .....	22	S. ....	Schuykill No. 1 washery, .....	Schuykill, .....	Killed by fall of dirt bank, .....
2	Neil DeGrocko, .....	Italian, .....	Laborer, .....	22	M. 1	Schuykill No. 1 washery, .....	Schuykill, .....	Killed by fall of dirt bank, .....
2	Berman Greco, .....	Italian, .....	Laborer, .....	22	M. 1	Schuykill No. 1 washery, .....	Schuykill, .....	Killed by fall of dirt bank, .....
3	Andrew Mushock, .....	Pole, .....	Miner, .....	22	M. 1	.....	Schuykill, .....	Killed by fall of dirt bank, .....
3	John Conaghan, .....	Irish, .....	Miner, .....	22	M. 1	.....	Schuykill, .....	Killed by fall of dirt bank, .....
4	George Gruboskie, .....	Pole, .....	Miner, .....	22	M. 1	.....	Schuykill, .....	Killed by fall of dirt bank, .....
8	Ludwick Kaportiek, .....	Pole, .....	Miner, .....	27	M. 1	Shenandoah City, .....	Schuykill, .....	Killed by trip of coal, .....
16	Adam Slavic, .....	Pole, .....	Miner, .....	27	M. 1	Shenandoah City, .....	Schuykill, .....	Killed by rush of coal, .....
18	John Fogarty, .....	American, .....	Breaker, .....	18	S. ....	Packer No. 4, .....	Schuykill, .....	Fatally injured; leg torn off and body bruised by machinery. Died on 19th.
21	Joseph Rosevage, .....	Pole, .....	Laborer, .....	21	S. ....	Packer No. 5, .....	Schuykill, .....	Killed by fall of top, .....
24	James O'Connor, .....	Irish, .....	Conductor, .....	19	S. ....	St. Nicholas, .....	Schuykill, .....	Killed by cave-in of mine breast, .....
24	John Pinkus, .....	Pole, .....	Laborer, .....	20	M. 1	Primrose, .....	Schuykill, .....	Killed by a piece of coal, .....
31	Joseph Cichimsky, .....	Pole, .....	Miner, .....	24	M. 1	Tunnel Ridge, .....	Schuykill, .....	Killed by a fall of coal, .....
2	Edward Reed, .....	English, .....	Miner, .....	58	M. 1	North Mahanoy, .....	Schuykill, .....	Fatally injured; fell down manway, .....
7	Patrick Donahue, .....	American, .....	Miner, .....	45	M. 1	Kulckenbocker, .....	Schuykill, .....	Fatally injured; fell down manway, .....
9	Peter Putsewer, .....	Lithuanian, .....	Laborer, .....	21	S. ....	William Penn, .....	Schuykill, .....	Killed. Fell down slope, .....
23	William Beem, .....	American, .....	Shaker tender, .....	17	S. ....	North Mahanoy, .....	Schuykill, .....	Fatally injured; caught in the eleva- tor. Died on 24th.
26	Adolph Goveus, .....	Pole, .....	Miner, .....	26	S. ....	Maple Hill, .....	Schuykill, .....	Fatally injured. Face and hands burn- ed by powder. Died 3d December.
2	Joseph Polabinski, .....	Pole, .....	Miner, .....	33	M. 1	Gilberton, .....	Schuykill, .....	Fatally injured by fall of slate. Died th same night.
3	John Crag, .....	American, .....	Loco, helper, .....	21	S. ....	Packer No. 4, .....	Schuykill, .....	Fatally injured by cars. Died same night.
4	Micha Mugnoskie, .....	Slav, .....	Miner, .....	40	M. 1	Maple Hill, .....	Schuykill, .....	Fatally injured by fall of slate. Died same night.
4	Joseph Washlesfskie, .....	Pole, .....	Laborer, .....	29	M. 1	Aulenreid No. 4, .....	Schuykill, .....	Killed by fall of clod, .....
5	Harry Geary, .....	English, .....	Slope repairman, .....	58	W. ....	Turkey Run, .....	Schuykill, .....	Fatally injured by a cart, .....
6	Mich. Litna, .....	Lithuanian, .....	Miner, .....	29	S. ....	West Shenandoah, .....	Schuykill, .....	Fatally injured by powder. Died 13th.
7	John Abraham, .....	Lithuanian, .....	Laborer, .....	26	S. ....	Mahanoy City, .....	Schuykill, .....	Fatally injured by explosion of dyna- mite. Died same day.
7	Ant Bambridge, .....	English, .....	Laborer, .....	45	S. ....	Buck Mountain, .....	Schuykill, .....	Killed by fall of coal, .....

Aug.  
Nov.

Dec.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Sixth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of colliery.	County.	Nature and Cause of Accident in Brief.
Jan.								
16	Jos. Katakis.	Pole.	Loader.	20	S.	Easton Run.	Schuylkill.	Ankle fractured by fall of slate.
17	Geo. Egerton.	English.	Laborer.	50	M.	North Mahanoy.	Schuylkill.	Leg broken by a piece of slate.
17	John Sobitsky.	Pole.	Miner.	56	M.	Park No. 2.	Schuylkill.	Laceration of scalp and fracture of leg by fall of coal.
23	Simon Lucknavage.	Pole.	Laborer.	27	S.	Boston Run.	Schuylkill.	Hand blown off. Dynamite exploded.
24	Steve Casper.	Pole.	Miner.	34	S.	Packer No. 5.	Schuylkill.	Bruised by fall of coal.
24	Louis Vitenitsky.	Pole.	Miner.	40	M.	Packer No. 2.	Schuylkill.	Back injured; fall of slate.
26	Matt Boxnitsky.	Lithuanian.	Miner.	29	M.	Knickerbocker.	Schuylkill.	Skull fractured; struck by flying coal.
31	Thos. Doyle.	American.	Starter.	25	S.	Knickerbocker.	Schuylkill.	Arm broken by fall of coal.
31	John Lutskus.	Pole.	Miner.	25	M.	Packer No. 3.	Schuylkill.	Leg broken by fall of coal.
31	John Pichski.	Pole.	Laborer.	23	S.	Park No. 2.	Schuylkill.	Burned about the body; explosion of powder.
31	Chas. Lunoos.	Italian.	Miner.	39	S.	Tunnel Ridge.	Schuylkill.	Head and face cut by shot exploding.
31	Arthy Vichasevli.	Italian.	Miner.	21	S.	Primrose.	Schuylkill.	Bruised chest and shoulders by cars against rib.
31	John Machus.	Lithuanian.	Miner.	28	S.	Primrose.	Schuylkill.	Arm and hip cut by fall of timber.
Feb.								
1	Elmer Eisenhaver.	American.	Laborer.	21	S.	Maple Hill.	Schuylkill.	Seriously injured by falling timber.
5	Adam Smith.	Hungarian.	Slate shoveler.	49	M.	Knickerbocker.	Schuylkill.	Hand injured; cap exploded.
5	Robert Sneddon.	American.	Car loader.	21	S.	North Mahanoy.	Schuylkill.	Squeezed about the hips between car and breaker.
6	Edward Flail.	American.	Machinist.	50	M.	Primrose.	Schuylkill.	Laceration of leg by bed plate of pump falling.
11	Mike Sarpodas.	Lithuanian.	Miner.	57	M.	Turkey Run.	Schuylkill.	Leg fractured by car chain.
12	Mat Perkins.	Welsh.	Contractor.	48	M.	Indian Ridge.	Schuylkill.	Bruised on head and arms by fall of coal.
12	John Jones.	Welsh.	Miner.	45	M.	Indian Ridge.	Schuylkill.	Bruised about back and head by fall of coal.
13	Stney Pachules.	Pole.	Miner.	30	M.	Knickerbocker.	Schuylkill.	Burned by gas.
18	Thomas Connors.	Irish.	Carpenter.	35	S.	Packer No. 2.	Schuylkill.	Fractured arm; fell from a scaffold.
18	Mary Tractum.	Pole.	Miner.	28	S.	Maple Hill.	Schuylkill.	Burned by gas.
19	Wm. Secutsky.	Pole.	Miner.	35	S.	Maple Hill.	Schuylkill.	Burned by gas.
19	Frank Gaborovag.	Pole.	Miner.	40	S.	Maple Hill.	Schuylkill.	Burned by gas.
21	John Subick.	Hungarian.	Miner.	43	M.	St. Nicholas.	Schuylkill.	Laceration of leg by fall of coal.
26	James Morgans.	Irish.	Miner.	46	M.	St. Nicholas.	Schuylkill.	Burned by gas.
27	Edward McCary.	American.	Miner.	48	M.	Knickerbocker.	Schuylkill.	Arm lacerated; fell in front of car.
27	Mickle Whalen.	Pole.	Top man.	18	S.	Tunnel Ridge.	Schuylkill.	Leg broken by a fall of coal.
28	Joseph Giltzeavage.	Pole.	Miner.	22	S.	St. Nicholas.	Schuylkill.	Hand blown off by dynamite.

March	1	William Andruckick	Pole	Laborer	27	S. S.	Packer No. 3	Schuykill	Burned by gas.
	1	Frank Alex.	Pole	Miner	46	S. S.	Packer No. 3	Schuykill	Burned by gas.
	6	Albert Eisenhower	American	Laborer	10	S. S.	Kohley's Run	Schuykill	Struck by wagon.
	13	Harry McGuire	American	Machinist	24	S. S.	Packer No. 3	Schuykill	Burned about neck.
	13	Lewis Bencofske	Pole	Miner	33	S. S.	Eliangowan	Schuykill	Unconscious and his jaw fractured his clothes.
	21	Joseph Ozonutsky	Pole	Laborer	21	S. S.	St. Nicholas	Schuykill	Hips and back bruised by fall of coal.
	25	Thomas Stern	Pole	Miner	32	S. S.	Eliangowan	Schuykill	Leg broken by fall of coal.
	25	Robert Furman	American	Driver	34	S. S.	Honay Brook	Schuykill	Thigh and back bruised by fall of coal.
	26	John Brown	American	Laborer	24	S. S.	Kohinoor	Schuykill	Leg broken by fall of scaffold.
	31	John Brown	American	Asst. foreman	34	S. S.	Packer No. 5	Schuykill	Arm lacerated in cage.
April	1	Frank Gallagher	American	Miner	35	S. S.	Packer No. 5	Schuykill	Scalded about head and body by hot water from boiler.
	1	Pat. Honey	American	Miner	38	S. S.	Packer No. 5	Schuykill	Burned by gas.
	2	Ralph Coxist	Pole	Miner	39	S. S.	Pack Mountain	Schuykill	Burned by powder.
	15	Morgan Powell	American	Slate picker	17	S. S.	Indian Ridge	Schuykill	Wounded in head and neck broken by a fall.
	17	John Jimtus	Pole	Miner	23	S. S.	Suffolk	Schuykill	Head and neck fall of coal.
	19	Charles Lindemath	American	Driver	18	S. S.	Turkey Run	Schuykill	Severely injured; fell clear locomotive.
	23	George Metunes	Pole	Miner	45	M. M.	Tunnel Ridge	Schuykill	Head and face cut; shot exploded.
	24	Thomas Hambridge	English	Laborer	22	M. M.	Park No. 2	Schuykill	Foot cut and bruised by fall of coal.
	25	Harry Rowland	Welsh	Miner	48	M. M.	William Penn	Schuykill	Arm and back lacerated by a premature explosion.
May	1	William Reagles	Pole	Miner	31	M. M.	Tunnel Ridge	Schuykill	Burned by gas.
	1	Joseph Gulkies	Pole	Miner	26	M. M.	Tunnel Ridge	Schuykill	Lacerated head and back by fall of coal.
	2	Max Pedowbeck	Austrian	Miner	26	M. M.	Kohinoor	Schuykill	Face and hands burned by gas.
	3	Frank Albert	Pole	Miner	27	M. M.	Maple Hill	Schuykill	Arm broken by machinery.
	5	Charles Koch	American	Miller	23	M. M.	Packer No. 2	Schuykill	Foot mashed by fall of coal.
	9	Mich. Hanoshick	Lithuanian	Miner	29	M. M.	Onesida	Schuykill	Burned by fall of coal.
	16	John Consious	Lithuanian	Miner	23	M. M.	Draper	Schuykill	Burned by premature blast.
	16	James Walsh	Irish	Miner	46	M. M.	Praper	Schuykill	Bruised in the head and leg by falling down manway.
	17	William Jackiowick	Pole	Miner	24	M. M.	Suffolk	Schuykill	Burned by gas.
	17	Thomas McGreen	American	Miner	47	M. M.	Tunnel Ridge	Schuykill	Knee cap dislocated by fall of slate.
June	20	Matt Chinsky	Pole	Laborer	40	M. M.	St. Nicholas	Schuykill	Slightly burned by gas.
	21	Frank Arnet	Pole	Miner	40	M. M.	Maple Hill	Schuykill	Head and face badly cut; shot exploded.
	31	George Suckutsky	Pole	Miner	40	M. M.	Packer No. 4	Schuykill	Scalp wound and broken leg by fall of coal.
	1	Alex. Suckutsky	Pole	Laborer	26	M. M.	Shenadoah City	Schuykill	Head and back cut by fall of coal.
	1	Sel. Monitavich	Pole	Miner	33	M. M.	Suffolk	Schuykill	Head cut by fall of coal.
	3	James McHale	American	Driver	34	M. M.	Turkey Run	Schuykill	Arm broken; fell in tunnel.
	3	John Venslavage	Pole	Leader	34	M. M.	Suffolk	Schuykill	Head cut by fall of coal.
	7	Evan Croenavage	Russian	Miner	43	M. M.	Park No. 2	Schuykill	Arm broken and severe lacerations by explosion of shot.
	8	John Tomislick	Pole	Miner	37	M. M.	Maple Hill	Schuykill	Back hurt by fall of coal.
	13	Michael Grady	Irish	Miner	52	M. M.	Indian Ridge	Schuykill	Hands and side burned; explosion of powder.
	13	Pierce Switsky	Pole	Miner	26	M. M.	St. Nicholas	Schuykill	Hip dislocated; fell under cars.
	14	John Smolton	American	Leader boss	36	M. M.	Turkey Run	Schuykill	Toe cut off by fall of coal.
	19	Simon Fritz	Pole	Miner	35	M. M.	Park No. 2	Schuykill	Burned on hands and face by gas.
	20	Thomas Vancouskie	Pole	Miner	29	M. M.	Tunnel Ridge	Schuykill	Burned on hands and face by gas.
	20	John Vassutsky	Pole	Leader	25	M. M.	Tunnel Ridge	Schuykill	Burned on hands and face by gas.
	20	John Vassutsky	Pole	Leader	25	M. M.	Tunnel Ridge	Schuykill	Back injured by fall of top coal.
	20	Andrew Babus	Pole	Miner	50	M. M.	St. Nicholas	Schuykill	Face and hands burned by gas.
	22	Mike Barussek	Pole	Miner	33	M. M.	Eliangowan	Schuykill	Face and hands burned by gas.
	23	Stine Vancouskie	Pole	Miner	35	M. M.	Eliangowan	Schuykill	Face and hands burned by gas.



TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
July	Charles Polasky, ....	Pole, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, ....	Leg broken by fall of coal.
	Ad. Bertles, .....	Pole, .....	Miner, .....	25	M.	Maple Hill, .....	Schuykill, ....	Leg fractured; buggy, fell on him.
	John Busch, .....	American, .....	Driver, .....	28	M.	Indian Ridge, .....	Schuykill, ....	Leg broken by car.
	Joe Gondarda, .....	Pole, .....	Miner, .....	29	S.	Subok, .....	Schuykill, ....	Burned by gas.
	Andrew Switzer, .....	German, .....	Miner, .....	45	M.	Primrose, .....	Schuykill, ....	Shoulder dislocated by fall of coal.
25	John Murphy, .....	American, .....	Laborer, .....	21	S.	Packer No. 4, .....	Schuykill, ....	Injured internally. He slipped and fell in breaker.
31	Chas. Wilkitts, .....	Pole, .....	Miner, .....	23	S.	Kniekerbocker, .....	Schuykill, ....	Back and side seriously injured by fall of top coal.
Aug.	Michael Toomey, ....	American, .....	Laborer, .....	23	S.	Cambridge, .....	Schuykill, ....	Compression of brain, chest and abdomen by fall of top coal.
	Mike Ryan, .....	Irish, .....	Miner, .....	55	M.	Packer No. 5, .....	Schuykill, ....	Burned about hands and face by gas.
	Wash Ruglok, .....	Pole, .....	Rockman, .....	59	M.	Packer No. 3, .....	Schuykill, ....	Squeezed about body; caught between car and building.
	Alex. Donaldson, ....	American, .....	Miner, .....	25	S.	Packer No. 4, .....	Schuykill, ....	Back hurt by top coal.
	Simon Nozitsky, ....	Pole, .....	Loader, .....	49	S.	Packer No. 3, .....	Schuykill, ....	Squeezed about the body; caught between cars and timber.
16	Frank Thissavage, ....	Pole, .....	Miner, .....	29	M.	Ellangowan, .....	Schuykill, ....	Face, hands and body burned by powder.
19	John Powell, .....	Welsh, .....	Loader, .....	39	M.	Tunnel Ridge, .....	Schuykill, ....	Hurt about hands and side; ignited dynamite.
21	Charles Yerlott, .....	German, .....	Miner, .....	48	M.	Vulcan, .....	Schuykill, ....	Burned on hands by gas.
21	Joseph Krook, .....	Lithuanian, .....	Miner, .....	40	S.	Vulcan, .....	Schuykill, ....	Hands crushed between bumpers.
21	Patrick Turk, .....	American, .....	Miner, .....	41	S.	Indian Ridge, .....	Schuykill, ....	Crushed by fall of slate.
24	Alon Fitzwilliams, ....	Welsh, .....	Miner, .....	45	S.	Packer No. 5, .....	Schuykill, ....	Crushed about body; caught between car and rock.
28	John McIntyre, ....	American, .....	Driver, .....	25	S.	Packer No. 5, .....	Schuykill, ....	Crushed about body; caught between car and rock.
Sept.	Anty Martle, .....	Pole, .....	Miner, .....	29	M.	Ellangowan, .....	Schuykill, ....	Rib fractured; caught between car and chute.
	Mich. Dumberofski, ....	Pole, .....	Laborer, .....	32	M.	Sufolk, .....	Schuykill, ....	Bruised about the body; fall of slate.
	Charles Lewis, .....	American, .....	Driver, .....	21	S.	Packer No. 4, .....	Schuykill, ....	Injured by fall of slate.
	Jerry Mahoney, .....	Welsh, .....	Timberer, .....	38	M.	Packer No. 4, .....	Schuykill, ....	Injured by fall of slate.
	John Heiber, .....	American, .....	Miner, .....	35	M.	Ellangowan, .....	Schuykill, ....	Head and leg injured by fall of coal.
Oct.	Anthony Micklasosky, ....	Lithuanian, .....	Miner, .....	40	M.	Turkey Run, .....	Schuykill, ....	Hip injured by fall of rock.
	Joseph Moenpolskie, ....	Lithuanian, .....	Miner, .....	45	M.	Draper, .....	Schuykill, ....	Injured by fall of top coal.
	John Pollont, .....	Russian, .....	Laborer, .....	33	M.	Leas Ridge, .....	Schuykill, ....	All of his ribs broken on one side; stepped off cat.
9	Lik Richardson, .....	American, .....	Starter, .....	32	M.	Kebby's Run, .....	Schuykill, ....	Injured by explosion of a cap.
11	William Butler, .....	American, .....	Miner, .....	42	M.	Aulenreid, .....	Schuykill, ....	Leg broken by fall of slate.

15	Albert Gruleskie, ...	Pole, .....	Laborer, .....	35	S. M.	Park No. 2, .....	Schuykill, .....	Thigh broken by fall of coal.
16	David Walters, ...	Welsh, .....	Miner, .....	50	M.	Honey Brook No. 3, .....	Schuykill, .....	Leg fractured and back injured by fall of bone.
17	Frank Friday, .....	Pole, .....	Miner, .....	35	M.	Packer No. 2, .....	Schuykill, .....	Leg and arm broken by fall of coal.
18	Lewis Zigler, .....	Hungarian, .....	Miner, .....	28	M.	Mahanoy City, .....	Schuykill, .....	Leg broken by rush of coal.
19	Geo. Davies, .....	Welsh, .....	Miner, .....	49	M.	Gilberton, .....	Schuykill, .....	Burned by explosion of gas.
20	Job Davies, .....	Welsh, .....	Laborer, .....	23	M.	Gilberton, .....	Schuykill, .....	Burned by explosion of gas.
21	William Bradley, .....	American, .....	Laborer, .....	22	M.	Gilberton, .....	Schuykill, .....	Thigh broken by fall of coal.
22	Melt Kaudenbush, ...	American, .....	State picker, ...	15	M.	Elangowan, .....	Schuykill, .....	Thigh broken by fall of coal.
23	Edward Roberts, ...	American, .....	Laborer, .....	18	S.	William Penn, .....	Schuykill, .....	Compound fracture of arm; fell under car.
24	John Ambrose, ...	Pole, .....	Miner, .....	23	M.	Packer No. 3, .....	Schuykill, .....	Bruised and cut; explosion of shot.
25	Sam Hous, .....	German, .....	Miner, .....	40	M.	North Mahanoy, .....	Schuykill, .....	Leg broken and back bruised; fall of coal.
26	Sam Myers, .....	English, .....	Laborer, .....	45	M.	Tunnel Ridge, .....	Schuykill, .....	Three ribs broken; sprang fell down slope.
27	William Marshall, ...	Pole, .....	Miner, .....	35	S.	North Mahanoy, .....	Schuykill, .....	Back hurt and hand cut; fall of coal.
28	Robert Marshall, ...	Pole, .....	Miner, .....	28	M.	Knickerbocker, .....	Schuykill, .....	Injured about body; fell down manway.
29	Martin Coyle, .....	American, .....	Plane tender, ...	26	S.	Packer No. 4, .....	Schuykill, .....	Injured; caught by dumper.
30	Frank Swick, .....	Lithuanian, .....	Miner, .....	37	S.	Vulcan, .....	Schuykill, .....	Leg broken; internally; fell 15 feet in manway.
31	Thomas Williams, ...	American, .....	Laborer, .....	27	M.	Knickerbocker, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
32	Frank Fry, .....	American, .....	Jig boss, .....	22	M.	Packer No. 4, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
33	Mike Paris, .....	Hungarian, .....	Miner, .....	45	M.	Medea, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
34	William Latis, ...	Pole, .....	Miner, .....	30	M.	Indian Ridge, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
35	Joseph Schensefskite, ...	Pole, .....	Laborer, .....	33	M.	Indian Ridge, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
36	Harry Toll, .....	American, .....	Miner, .....	25	M.	Knickerbocker, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
37	Edward Garris, ...	American, .....	Miner, .....	25	M.	Knickerbocker, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
38	Marshall Myers, ...	English, .....	Miner, .....	25	M.	Knickerbocker, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
39	John Zaluski, .....	Pole, .....	Miner, .....	58	M.	West Shenandoah, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
40	John Zaluski, .....	Pole, .....	Miner, .....	30	M.	Suffolk, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
41	William Noon, ...	Lithuanian, .....	Miner, .....	30	S.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
42	Tommiok Posam, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
43	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
44	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
45	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
46	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
47	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
48	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
49	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
50	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
51	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
52	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
53	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
54	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
55	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
56	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
57	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
58	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
59	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
60	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
61	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
62	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
63	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
64	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
65	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
66	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
67	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
68	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
69	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
70	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
71	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
72	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
73	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
74	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
75	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
76	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
77	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
78	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
79	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
80	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
81	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
82	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
83	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
84	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
85	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
86	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
87	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
88	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
89	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
90	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
91	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
92	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
93	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
94	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
95	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
96	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
97	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
98	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
99	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.
100	William Noon, ...	Irish, .....	Miner, .....	45	M.	Packer No. 2, .....	Schuykill, .....	Arm broken; caught in sprocket wheel.



# Seventh Anthracite District.

NORTHUMBERLAND, COLUMBIA, SCHUYLKILL AND DAUPHIN  
COUNTIES.

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Shamokin, Pa., March 8, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of herewith submitting to you my annual report as Inspector of Coal Mines for the Seventh Anthracite District for the year 1901.

There were 7,052,828 tons of coal produced, as against 6,070,701 tons in 1900, being an increase of 98,127 tons over that of the preceding year.

The shipments were 6,145,402 tons, an increase of 880,849 tons.

The number of fatal accidents was sixty-two, an increase of thirteen over that of 1900.

There were ninety-five non-fatal accidents, an increase of four over the number for last year.

The average number of tons of coal produced per life lost was 113,755.

The average number of tons of coal produced per accident was 44,922.

The average number of tons produced per employe was 355.41.

Yours very respectfully,

EDWARD BRENNAN,  
Inspector of Mines.

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## Remarks on Mine Accidents.

The excellent provisions made by our Commonwealth to protect Anthracite miners, should lessen the dangers of this calling. But it must be borne in mind that new conditions in mining have occurred, as working the coal at great depths and over large territory, subject to greater pressure and steeper pitches, with larger bodies of gas. To meet the increased dangers thus produced, great care upon the part of the managements will be required.



In looking over the casualties for 1901, in my district, I feel justified in saying that at least fifty per cent. were the result of ignorance and carelessness. If the law of 1885 were fully lived up to by the employes, one-half of these accidents would not have occurred. What remedy have we to reduce the number? It seems to me that the remedy is a stricter enforcement of the rules of the mines as regards the use of safety lamps, the security of the top by necessary timber, greater care in ascending and descending shafts, greater care in putting off blasts, the careful handling of explosives, etc.

Those having the oversight authority in the mines should have all rules carried out by their men, and any one refusing to obey the rules should suffer a discharge, for it is not right that one careless or disobedient miner should imperil the lives of his fellow workmen. Good rules rigidly enforced in the mines will most certainly reduce the number of accidents.

#### Examination of Applicants for Mine Foreman Certificates.

The annual examination of applicants for mine foreman certificates in the Seventh anthracite district was held at Pottsville, June 5th and 6th, 1901, before the following board, viz: Edward Brennan, Mine Inspector, Shamokin; Andrew Robertson, coal operator, Pottsville; Jacob Fleming, miner, Excelsior, and Joseph Corbe, miner, Ashland.

The following were recommended to receive certificates:

#### Mine Foreman.

Henry Perong, Girardville.

Peter Bodmann, Locust Dale.

James O'Neal, Mount Carmel.

David E. Stine, Mount Carmel.

Nicholas S. Brokenshire, Mount Carmel.

Thomas B. Davis, Mount Carmel.

William E. Jones, Williamstown.

Peter Naylor, Trevorton.

Thomas J. Joyce, Locust Gap.

#### Assistant Foreman.

William E. Manney, Mount Carmel.

Morton Lamb, Centralia.

Albert Clews, Centralia.

Thomas A. McNamara, Williamstown.

David D. Jones, Williamstown.

James O'Connor, Shamokin.

James O'Rourke, Trevorton.

TABLE A—Showing the Total Production of Coal, the Number of Persons Employed by Each Company During the Year 1901, and the Average Number of Tons Produced per Each Employee.

Names of Companies.	Number of tons produced.	Number of persons employed.
Philadelphia and Reading Coal and Iron Company, .....	2,618,382.14	6,956
Lehigh Valley Coal Company, .....	299,778.09	831
The Union Coal Company, .....	1,007,328.18	3,372
Mineral Railroad and Mining Company, .....	786,096.00	2,228
Summit Branch and Lykens Valley Coal Companies, .....	741,582.10	2,353
Excelsior Coal Company, .....	162,273.04	382
T. M. Righter & Company, .....	188,606.06	336
Shamokin Coal Company, .....	295,598.09	962
Enterprise Coal Company, .....	216,288.00	553
Shipman Coal Company, .....	73,668.09	300
Seneca Coal Company, .....	51,050.16	206
White & White, .....	56,697.11	203
Royal Oak Coal Company, .....	47,250.00	183
Greenough Red Ash Coal Company, .....	61,598.00	241
Midvalley Coal Company, .....	446,628.18	728
Total, .....	7,052,828.04	19,841

Average number of tons produced per employee, 355.41.

TABLE B—Number of Fatal Accidents and Tons of Coal Produced per Life Lost.

Names of Companies.	Number of fatal accidents.	Number of tons of coal produced per life lost.
Philadelphia and Reading Coal and Iron Company, .....	20	130,919
Lehigh Valley Coal Company, .....	1	299,778
The Union Coal Company, .....	12	83,941
Mineral Railroad and Mining Company, .....	4	196,524
Summit Branch and Lykens Valley Coal Companies, .....	10	74,155
Excelsior Coal Company, .....	1	162,273
T. M. Righter & Company, .....	3	188,606
Shamokin Coal Company, .....	2	98,533
Enterprise Coal Company, .....	2	108,144
Shipman Coal Company, .....	2	36,834
Seneca Coal Company, .....	2	25,525
White & White, .....	2	56,698
Royal Oak Coal Company, .....	2	23,625
Greenough Red Ash Coal Company, .....	1	61,598
Midvalley Coal Company, .....	2	223,314
Total, .....	62	1,770,473

TABLE C—Number of Fatal and Non-Fatal Accidents and Number of Tons of Coal Produced per Accident.

Names of Companies.	Number of accidents.	Number of tons of coal produced per accident.
Philadelphia and Reading Coal and Iron Company, .....	44	59,598
Lehigh Valley Coal Company, .....	10	29,977
The Union Coal Company, .....	31	32,494
Mineral Railroad and Mining Company, .....	16	49,131
Summit Branch and Lykens Valley Coal Companies, .....	20	37,079
Excelsior Coal Company, .....	3	54,091
T. M. Righter & Company, .....	7	26,943
Shamokin Coal Company, .....	7	42,228
Enterprise Coal Company, .....	3	72,096
Shipman Coal Company, .....	4	18,417
Seneca Coal Company, .....	6	8,508
White & White, .....	.....	56,697
Royal Oak Coal Company, .....	2	23,625
Greenough Red Ash Coal Company, .....	1	61,598
Midvalley Coal Company, .....	3	148,876
Total, .....	157	.....

TABLE D—Classification of Accidents.

	Killed or fatally injured.	Injured.	Total.
Falls of coal, rock and roof, .....	26	31	57
Smothered by gas, .....	2	.....	2
Explosions of gas, .....	1	12	13
Falling down manways, breasts and slopes, .....	4	3	7
Explosions of blasts, .....	5	12	17
Cars, inside, .....	6	11	17
Cars, outside, .....	2	4	6
Miscellaneous, inside, .....	6	8	14
Miscellaneous, outside, .....	10	14	24
Total, .....	62	95	157

TABLE E—Occupations of Persons Killed and Injured.

	Killed or fatally injured.	Injured.	Total.
Miners, .....	35	44	79
Laborers, .....	17	29	46
Drivers, .....	3	11	14
Repair men, .....	1	1	2
Top man, .....	1	1	1
Locomotive engineer, .....	1	4	5
Slate pickers, .....	3	1	4
Fire bosses, .....	1	1	2
Loader, .....	1	1	2
Spraggers, .....	1	1	2
Car loader, .....	2	2	4
Total, .....	62	95	157

TABLE F—Nationalities of Persons Killed or Injured.

	American.	English.	Welsh.	Irish.	German.	Poles.	Slav.	Austrian.	Hungarian.	Italian.	Russian.	Lithuanian.	Greek.	Total.
Killed, .....	26	3	1	4	4	13	2	2	2	1	4	2	1	62
Injured, .....	41	3	4	2	3	24	3	3	4	2	2	2	1	95
Total, .....	67	3	5	7	7	37	5	5	6	3	6	5	1	157

Accidents for Past Five Years in Seventh District.

	Fatal.	Non-fatal.	Total accidents.
1897, .....	46	119	165
1898, .....	46	112	158
1899, .....	52	90	142
1900, .....	49	91	140
1901, .....	62	95	157
Total, .....	255	507	762
Average, .....	51	101	152



## Coal Production for Past Five Years in Seventh District.

	Coal shipped.	Used at collieries and local sales.	Total production.
1897, .....	4,377,761	731,187	5,108,948
1898, .....	4,331,093	743,741	5,074,834
1899, .....	5,456,091	852,243	6,308,334
1900, .....	5,264,553	806,148	6,070,701
1901, .....	6,145,402	907,426	7,052,828
Total, .....	25,574,900	4,040,745	29,615,645
Average, .....	5,114,980	808,149	5,923,129

TABLE I—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Seventh Anthracite District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>Phila. &amp; Reading Coal &amp; Iron Co.</b>						
Burnside.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Bear Valley.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Henry Clay.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Big Mountain.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Stirling.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
North Franklin.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Alaska.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Reliance.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Louest Gap.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Louest Spring.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Louest Spring washery.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Merriam.	Northumberland.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
East.	Columbia.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
Preston No. 3.	Schuylkill.	R. C. Luther.	Pottsville.	John Veith.	Pottsville.	Philadelphia and Reading.
<b>Lehigh Valley Coal Co.</b>						
Centralia.	Columbia.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercut.	Centralia.	Lehigh Valley Railway.
Logan.*	Columbia.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercut.	Centralia.	Lehigh Valley Railway.
Continental.*	Columbia.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercut.	Centralia.	Lehigh Valley Railway.
Big Mine Run.*	Schuylkill.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercut.	Centralia.	Lehigh Valley Railway.
Louest Run.f	Columbia.	S. D. Warriner.	Wilkes-Barre.	R. S. Mercut.	Centralia.	Lehigh Valley Railway.
<b>The Union Coal Co.</b>						
Pennsylvania.	Northumberland.	Morris Williams.	Wilkes-Barre.	Wm. R. Reinhardt.	Shamokin.	Pennsylvania R. R. (N. C.)
Hickory Swamp.	Northumberland.	Morris Williams.	Wilkes-Barre.	Wm. R. Reinhardt.	Shamokin.	Pennsylvania R. R. (N. C.)
Hickory Ridge.	Northumberland.	Morris Williams.	Wilkes-Barre.	Wm. R. Reinhardt.	Shamokin.	Pennsylvania R. R. (N. C.)
Richards.	Northumberland.	Morris Williams.	Wilkes-Barre.	Wm. R. Reinhardt.	Shamokin.	Pennsylvania R. R. (N. C.)
Scott shaft.	Northumberland.	Morris Williams.	Wilkes-Barre.	Wm. R. Reinhardt.	Shamokin.	Pennsylvania R. R. (N. C.)
<b>Mineral R. R. &amp; Mining Co.</b>						
Cameron.	Northumberland.	Morris Williams.	Wilkes-Barre.	Robert A. Quinn.	Shamokin.	Pennsylvania R. R. (N. C.)
Luke Fidler.	Northumberland.	Morris Williams.	Wilkes-Barre.	Robert A. Quinn.	Shamokin.	Pennsylvania R. R. (N. C.)
<b>Summit Branch and Lykens Valley Coal Co.</b>						
Williamstown.	Dauphin.	Morris Williams.	Wilkes-Barre.	Hood McKay.	Lykens.	Pennsylvania Railroad.
Short Mountain.	Dauphin.	Morris Williams.	Wilkes-Barre.	Hood McKay.	Lykens.	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Excelsior Coal Co.	Northumberland,	Andrew Robertson,	Shamokin,	A. D. Robertson,	Shamokin,	Pennsylvania Railroad.
Corbin,	Northumberland,	Andrew Robertson,	Shamokin,	Geo. W. Robertson,	Shamokin,	Philadelphia and Reading.
T. M. Righter & Co., <sup>1</sup>	Northumberland,	Thos. M. Righter,	Mt. Carmel,	Thos. M. Righter,	Mt. Carmel,	Lehigh Valley.
Mt. Carmel,	Northumberland,	Henry Vincent,	Natalie,			Philadelphia and Reading.
Enterprise Coal Co.	Northumberland,	W. L. Connell,	Scranton,	W. L. Connell,	Scranton,	Philadelphia and Reading.
Shipman Coal Co.	Northumberland,	E. J. Corliss,	Shamokin,			Pennsylvania Railroad.
White & White.	Northumberland,	E. E. White,	Mt. Carmel,	E. E. White,	Mt. Carmel,	Lehigh Valley.
Columbia No. 2,	Northumberland,	Geo. P. Davis,	Shamokin,			Philadelphia and Reading.
Royal Oak Coal Co.	Columbia,	Not working.				
Midvalley Coal Co.	Columbia,					
Midvalley No. 1,	Northumberland,					
Midvalley No. 2,	Northumberland,					
Greenough Red Ash Coal Co.	Northumberland,					
Greenough,	Northumberland,					
Seneca Coal Co.	Northumberland,	S. D. Warriner,	Wilkes-Barre,	R. S. Mercur,	Centralla,	Lehigh Valley & Penna.
Sioux,	Northumberland,					

<sup>1</sup>Included in Centralla.<sup>2</sup>Pumping Station.

TABLE II—Gives the total number of tons of coal mined in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Seventh Anthracite District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Unla. and Reading Coal and Iron Co.												
Burnside, .....	Northumberland.	262,584.12	38,326	5,054	305,964.12	230 3-20	778	4	3	6,807	19,278	129
Stirling, .....	Northumberland.	186,831.19	13,712	473	201,016.19	215 13-20	307	1	3	3,077	2,669½	60
Pear Valley, .....	Northumberland.	112,465.12	29,973	12,044	185,482.12	146 4-20	473	1	1	5,121	11,250	72
Henry Clay, .....	Northumberland.	535,268.18	23,529	5,258	584,025.18	227 13-20	148	1	1	1,876	4,115½	65
Big Mountain, .....	Northumberland.	248,892.09	16,283	164	265,339.09	226 16-20	526	2	1	4,885	15,186½	65
North Franklin, .....	Northumberland.	242,495.08	18,235	9,241	290,171.08	218 3-20	740	1	2	8,307	10,394½	95
Alaska, .....	Northumberland.	376,301.16	46,846	2,536	415,483.16	222 13-20	480	3	2	7,526	7,580	56
Belmont, .....	Northumberland.	11,155	11,155	5,835	11,155	216 18-20	361	2	4	3,442	6,442	54
Locust Gap, .....	Northumberland.	292,273.16	35,717	3,838	333,825.16	216 4-20	16	1	2	832	93,788	71
Locust Spring, .....	Columbia.	174,930.06	31,188	3,838	209,906.06	216 8-20	770	5	1	637	38,178	71
Locust Spring washery, .....	Schuykill.	130,802.17	32,208	.....	172,010.17	216 18-20	416	1	1	95	26,583¾	41
Preston No. 3, .....	Schuykill.	2,277,017.14	297,122	44,243	2,618,382.14	213 1-5	6,956	20	24	48,497	261,496¾	782
Total, .....		266,273.19	26,983	6,521.10	299,778.09	179 2-10	831	1	9	4,717	36,107½	90
Lehigh Valley Coal Co.												
Centralla, .....	Columbia.	266,273.19	26,983	6,521.10	299,778.09	179 2-10	831	1	9	4,717	36,107½	90
Locust Run, .....	Columbia.	266,273.19	26,983	6,521.10	299,778.09	179 2-10	831	1	9	4,717	36,107½	90
Total, .....		266,273.19	26,983	6,521.10	299,778.09	179 2-10	831	1	9	4,717	36,107½	90



TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
<b>The Union Coal Co.</b>												
Pennsylvania.....	Northumberland.	330,784.17	39,192	8,775.46	939,689.13	955 15-20	1,035	2	11	13,569	31,054	192
Hickory Swamp.....	Northumberland.	114,935.19	8,057.1	1,031.14	134,023.48	255 15-20	1,035	2	.....	4,430	8,092	72
Hickory Ridge.....	Northumberland.	155,036.08	34,293	1,774.12	194,090.60	258 17-20	614	3	1	4,939	9,092	44
Richards.....	Northumberland.	264,649.13	54,150	61	318,800.13	219 16-20	1,015	5	5	7,919	23,849	84
Scott.....	Northumberland.	.....	3,707.02	.....	3,707.02	217	188	2	2	.....	14,600	5
Total.....	.....	865,386.17	139,253.02	11,688.19	1,007,228.18	210½	3,372	12	19	27,948	89,053	289
<b>Mineral Railroad and Mining Co.</b>												
Cameron.....	Northumberland.	461,546.02	38,874	16,272	516,522.02	297 3-10	1,428	4	11	13,712	36,378	138
Luke Piller.....	Northumberland.	230,217.65	27,633	11,713.43	269,563.18	238 9-10	810	.....	1	7,436	21,078	61
Total.....	.....	691,603.67	66,507	27,985.13	786,096.00	253 1-10	2,238	4	12	21,148	57,456	199
<b>Summit Branch and Lykens Valley Coal Co.</b>												
Williamstown.....	Dauphin.	251,265.02	109,009.02	7,985.07	368,280.11	215 3-10	1,161	6	9	5,149	24,900	110
Short Mountain.....	Dauphin.	318,134.10	41,288.04	13,879.05	373,301.19	282¼	1,192	4	1	2,539	13,856	158
Total.....	.....	569,399.12	150,318.06	21,864.12	741,582.10	248¾	2,353	10	10	7,688	48,756	268
<b>Excelsior Coal Co.</b>												
Excelsior.....	Northumberland.	101,829.10	4,050	457.13	106,328.03	214 9-10	194	.....	.....	2,070	500	32
Corbin.....	Northumberland.	32,735.01	3,150	.....	55,945.01	200 6-10	198	1	2	3,110	3,400	25
Total.....	.....	154,615.11	7,200	457.13	162,273.04	207¾	392	1	2	5,180	5,900	57
<b>T. M. Richter &amp; Co.</b>												
Mt. Carmel.....	Northumberland.	164,361.17	18,428	2,983.09	188,606.06	249	336	.....	7	1,052	35,284	38

		264,351	25,500	5,747.09	295,598.09	255	5-10	962	3	4	7,000	4,000	100
Natalie,	Shamokin Coal Co.												
Enterprise Coal Co.	Northumberland,	293,210	12,672	406	216,288	203	7-10	553	2	1	8,232	6,125	62
Enterprise,	Northumberland,												
Colbert,	Shipman Coal Co.	67,231.19	4,617	1,819.10	73,668.09	165½		300	2	2	2,945	5,200	23
	Northumberland,												
Columbus No. 2,	White & White,	48,993.13	2,132	5,571.18	56,697.11	227	1-10	203	.....	.....	3,650	7,500	12
Royal Oak,	Northumberland,												
Royal Oak Coal Co.	Northumberland,	40,775	3,500	2,975	47,250	186	6-10	183	2	.....	1,800	1,000	12
Midvalley Coal Co.	Columbia,	432,869.02	10,756	2,009.16	446,628.18	261	9-10	728	2	1	7,324	95,604	84
Greenough Red Ash Coal Co.	Northumberland,	58,473	3,000	125	61,568	229	8-10	241	1	.....	1,945	6,275	7
Greenough,	Northumberland,												
Sioux,	Seneca Coal Co.	39,839.13	10,588	622.03	51,660.16	137	4-10	206	2	4	1,032	2,307	22
Grand total,		6,145,402	772,403	135,023	7,052,828	*216		19,844	62	95	150,459	660,094	2,455

\*Average.

TABLE II.—Continued.

Name of Operators.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	No. air compressors.	
		Cylindrical.	Horse power.	Tubular.	Horse power.	Steam.	Air.									Electric.
Phila. and Reading Coal and Iron Co.,	Northumberland,	78	2,340	123	15,996	18,229	2	96	15,493	51	47,435	29,700	1			
Delaware Valley Coal Co.,	Columbia,	15	540	16	2,760	3,300	3		2,760	26	11,760	7,700				
The Union Coal Co.,	Northumberland,	10	150	16	2,760	2,910	6		2,810	26	11,499	4,414				
Mineral Railroad and Mining Co.,	Northumberland,	16	150	21	2,870	4,064	4		3,676	11	4,728	4,728	1			
Shenandoah and Lykens Valley Coal Co.,	Northumberland,	108	5,280	55	6,945	12,225	9	3	6,012	13	10,282	6,878	2			
Frederick Co. Coal Co.,	Northumberland,	22	990			990	1		1,500	3	1,500	3,500				
W. M. Richter & Co.,	Northumberland,	20	600	4	616	1,216	2		1,215	3	2,700	2,700				
Shamokin Coal Co.,	Northumberland,	17	340	4	524	864	3		879	3	76,000	21,000				
Enterprise Coal Co.,	Northumberland,	5	27	12	1,500	1,500	3	3	1,084	3	2,220	2,220	2			
Shippagan Coal Co.,	Northumberland,	3	120	3	30	405		7	705		1,296	800				
White & White,	Northumberland,	4	120	2	120	120		6	117							
Read Oak Coal Co.,	Northumberland,						1	8	216	3	3,000	1,000				
Mitvalley Coal Co.,	Columbia,	16	2,150	10	2,150	2,150	3		1,306							
Greenough Red Ash Coal Co.,	Northumberland,	33	333	3	255	255		3	169							
Seneca Coal Co.,	Northumberland,	285	10,487	291	39,860	52,315	36	11	270	2	900	300				
Grand total.		285	10,487	291	39,860	52,315	36	413	49,726	123	166,711	80,450	5		8	

TABLE III—Showing the number of each class of employees at each colliery in the Seventh Anthracite District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total, inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.			
P. & R. Coal and Iron Co.	Northumberland.	1	6	265	109	26	16	64	488	1	10	93	134	2	119	290	778		
Burnside.	Northumberland.	1	2	175	36	16	9	74	313	1	4	19	19	1	107	160	473		
Bear Valley.	Northumberland.	1	4	122	39	21	6	82	266	1	5	20	67	3	76	167	433		
Henry Clay.	Northumberland.	1	1	69	17	7	1	30	127	1	2	9	1	1	3	17	137		
Big Mountain.	Northumberland.	1	1	119	33	20	7	77	261	1	1	1	1	1	3	46	307		
Stirling.	Northumberland.	1	4	131	63	19	6	101	327	1	13	14	68	2	101	189	596		
North Franklin.	Northumberland.	1	4	272	47	55	17	104	501	1	12	27	101	3	95	359	740		
Alaska.	Northumberland.	1	4	225	39	31	16	63	389	1	8	22	85	3	81	200	580		
Reliance.	Northumberland.	1	3	188	33	18	6	112	361	1	1	1	1	1	1	1	371		
Locust Gap.	Northumberland.	1	6	185	59	38	8	172	470	2	17	45	147	6	162	379	849		
Lecest Spring.	Northumberland.	1	1	110	29	34	23	229	477	1	8	25	192	2	114	343	770		
Morrian.	Columbia.	1	9	47	20	27	32	134	341	1	6	20	86	2	103	218	550		
Potts.	Schuylkill.	1	6	42	38	14	14	119	233	1	6	23	88	1	64	153	416		
Bast.	Schuylkill.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Preston No. 3.	Schuylkill.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Total.		29	61	1,973	553	326	169	1,404	4,497	17	92	254	1,042	26	1,028	2,439	6,956		
Lehigh Valley Coal Co.	Columbia.	5	2	217	75	48	2	138	487	3	17	23	60	3	234	330	817		
Centralia.	Columbia.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Locust Run.	Columbia.	5	2	217	75	48	2	145	464	4	18	27	60	3	225	337	831		
Total.		11	5	434	151	99	4	284	952	8	36	50	121	7	300	418	1,370		



TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.
The Union Coal Co.	Pennsylvania.	11	345	112	29	12	165	690	1	10	22	57	252	215	1,035	
	Northumberland.	3	107	55	16	5	83	293	1	5	10	61	121	270	492	
	Hickory Swamp.	3	159	76	18	9	110	371	1	7	13	91	159	273	614	
	Richards Ridge.	5	236	85	40	15	237	718	1	9	17	96	171	297	1,015	
	Scott.	1					104	165	1	14	6		50	81	186	
Total.		15	937	319	113	35	639	2,176	5	45	68	305	11	762	1,196	3,372
Mineral Railroad and Mining Co.	Northumberland.	7	529	180	80	22	191	1,028	2	17	28	230	3	129	400	1,428
	Cameron.	3	268	95	40	6	101	522	1	10	24	35	4	144	278	800
	Luke Miller.															
Total.		10	797	275	120	28	292	1,550	3	27	52	265	7	273	678	2,228
Summit Branch and Lykens Valley Coal Co.	Dauphin.	6	300	56	57	7	275	707	2	24	70	117	4	237	454	1,161
	Williamstown.	6	300	145	111	23	291	855	2	19	40	106	5	165	337	1,192
	Short Mountain.															
	Total.	12	600	201	171	30	536	1,562	4	43	110	223	9	402	791	2,353

Excessior Coal Co.	3	.....	29	42	9	1	17	111	2	5	3	29	1	43	83	194
Conlin, .....	3	.....	63	32	12	.....	22	132	2	3	6	25	1	129	29	198
Total, .....	6	.....	102	74	21	1	39	243	4	8	9	54	2	72	119	392
T. M. Richter & Co.	1	2	38	30	8	5	49	132	2	4	9	68	4	116	263	326
Mc. Carmel, .....	2	2	212	159	57	11	85	529	1	20	20	169	7	210	433	962
Shamokin Coal Co.	1	.....	229	39	40	4	51	264	1	8	21	81	2	76	189	552
Enterprise Coal Co.	1	1	71	27	8	.....	42	150	1	6	11	82	2	48	150	300
Enterprise, .....	1	1	83	20	17	2	15	129	1	3	3	37	2	20	64	293
Shipman Coal Co.	1	2	80	10	18	3	6	120	1	4	8	18	2	30	63	183
White & White,	3	2	222	136	42	4	75	494	2	6	15	80	6	125	234	758
Columbus No. 2, .....	1	2	80	10	18	3	6	120	1	4	8	18	2	30	63	183
Royal Oak Coal Co.	1	1	67	53	4	.....	19	145	1	6	7	38	6	38	96	241
Midvalley Coal Co.	1	2	66	16	7	2	26	120	1	6	9	23	2	45	86	206
Midvalley Nos. 1 and 2, .....	82	140	5,704	2,017	1,000	287	3,486	12,716	48	702	623	2,603	91	3,461	7,128	19,814
Greenough Red Ash Coal Co.																
Greenough, .....																
Seneca Coal Co.																
Sioux, .....																
Grand total, .....																

TABLE III.—Continued.

Names of Operators.	County.	Number of Days Worked Each Month in Breakers.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
W. L. & Reading Coal & Iron Co.,	Nthd., Col. & Sch.	21	20½	19½	12 7-10	19 4-10	21¼	15	17 2-3	19½	22½	18½	12½
Lehigh Valley Coal Co.,	Columbia,.....	19	17 7-10	19 6-10	13 8-10	3	4 4-10	13 8-10	16 4-10	17 3-10	20 7-10	18 6-10	14 6-10
The Ohio Coal Co.,	Northumberland,	22	19 1-10	20	16¼	23¾	23½	22	22	19½	23	21½	20
Muscat Railroad and Mining Co.,	Northumberland,												
Summit Branch and Lykens Valley Coal Co.,	Northumberland,	23½	22	21½	22¼	22¾	16	21	19½	18¾	22½	20½	20¾
Excelsior Coal Co.,	Dauphin,.....	19	17 2-3	18	20¼	21½	18	20½	19½	18¾	22½	20½	20¾
T. M. Richter & Co.,	Northumberland,	18	17 8	19	16 3	19½	18	18	17	18¾	22½	20½	20¾
Shamokin Coal Co.,	Northumberland,	19 6-10	20 1-10	21 9-10	19 6-10	21 2-10	22 1	18 5	19 1	20 7	23 4	20 8	16 5
Shamokin Coal Co.,	Northumberland,	16 1	14 6	17 1	13 9	17 9	21 8-10	23 4-10	24 3-10	15 2-10	19 8-10	19 1-10	21 2-10
Shamokin Coal Co.,	Northumberland,	16 1	14 6	17 1	13 9	17 9	21 8-10	23 4-10	24 3-10	15 2-10	19 8-10	19 1-10	21 2-10
Whelan & Whelan,	Northumberland,	23 7-10	18	22 6-10	15 2-10	15 2-10	18 3-10	19 1-10	16	15 3-10	17 9-10	13 1-10	18 7
Whelan & Whelan,	Northumberland,	23 7-10	18	22 6-10	15 2-10	15 2-10	18 3-10	19 1-10	16	15 3-10	17 9-10	13 1-10	18 7
Royal Oak Coal Co.,	Northumberland,	14 4-10	15 2-10	19 6-10	14	14 4-10	16 8-10	16 2-10	14 1-10	15 9-10	19 6-10	16 9-10	9 4-10
Midvale Coal Co.,	Columbia,.....	23 9-10	19 7-10	25 3-10	19 4-10	23 7-10	23 5-10	19 1-10	21	22 2-10	23 5-10	22 5-10	18 4-10
Greenbush Red Ash Coal Co.,	Northumberland,	20 1	17 9	19 3	17 1	17 5	20 1	21 5	17 1	15 3	22 8	20 3	21 7-10
Seneca Coal Co.,	Northumberland,	1 2-10	.....	.....	12 8-10	16 7-10	17 6-10	12 4-10	11 9-10	15 5-10	17 3-10	17 3-10	11 7-10

\*Average.

TABLE IV—List of fatal accidents that occurred in and about the mines of the Seventh Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	11 Jacob Omler, .....	German, .....	Miner, .....	38	S.	1	2	Potts, .....	Schuylkill, ...	Burned by powder. Died on Jan. 12.
	11 Thomas Lynch, .....	Irish, .....	Miner, .....	39	M.	1	1	Potts, .....	Schuylkill, ...	Burned by powder on Jan. 11 and died Feb. 2.
	15 George Strabo, .....	Pole, .....	Miner, .....	37	M.	1	1	Richards, .....	North'd, .....	Killed by fall of slate.
	17 Peter Madrox, .....	Russian, .....	Laborer, .....	38	M.	1	1	Hickory Ridge, .....	North'd, .....	Killed by fall of top rock.
	23 Anthony Koshlak, .....	Pole, .....	Miner, .....	40	M.	1	1	Enterprise, .....	North'd, .....	Killed by fall of top rock.
	26 Adam Smith, .....	Pole, .....	Miner, .....	37	M.	1	1	Enterprise, .....	North'd, .....	Killed by fall of coal.
	26 Mike Mathews, .....	American, .....	Laborer, .....	35	M.	1	1	Enterprise, .....	North'd, .....	Killed by fall of top coal.
	21 Wm. Lechurst, .....	American, .....	Laborer, .....	18	S.	1	1	Short Mountain, .....	Dauphin, .....	Killed; head crushed between cars.
Feb.	14 Robert Matthews, .....	American, .....	Drill runner, .....	29	S.	1	1	Loest Spring, .....	North'd, .....	Killed; fell off bucket going up shaft.
	15 Walter McAndrew, .....	American, .....	Driver, .....	29	S.	1	1	Alaska, .....	North'd, .....	Killed; neck broken; caught between mine car and roof.
March	28 John McLean, .....	Irish, .....	Miner, .....	40	M.	1	4	Royal Oak, .....	North'd, .....	Skull fractured by coal from a shot.
	6 Nicholas Stader, .....	German, .....	Miner, .....	42	M.	1	1	Potts, .....	Schuylkill, ...	Lighting fuse; shot went off before he got to a place of safety.
	7 Simon Babares, .....	Russian, .....	Miner, .....	38	M.	1	4	Colbert, .....	North'd, .....	Back broken by a fall of coal. Died at Miners' Hospital March 12.
	9 Tobias Miller, .....	American, .....	Slate picker, .....	15	.....	.....	.....	Williamstown, .....	Dauphin, .....	Killed by being caught by a revolving wheel.
	13 John Snyder, .....	American, .....	Miner, .....	22	S.	.....	.....	North Franklin, .....	North'd, .....	Killed by a slip of coal falling from face of breast.
	14 George Ramsey, .....	American, .....	Miner, .....	24	S.	.....	.....	Hickory Swamp, .....	North'd, .....	While fore poling across old breast, prop broke and the coal and rock rushed on him, killing him instantly.
	14 Wm. Blyler, .....	American, .....	Miner, .....	30	M.	1	.....	Hickory Swamp, .....	North'd, .....	Piece of coal fell from side of gangway, killing him.
	26 George Hain, .....	American, .....	Miner, .....	48	M.	1	11	Burnside, .....	North'd, .....	Fatally injured by rock rushing on him. Died March 20.
April	27 Frank Mogulinski, .....	Pole, .....	Miner, .....	32	S.	.....	.....	Richards, .....	North'd, .....	Killed by falling down manway.
	3 David Jenkins, .....	Welsh, .....	Fire boss, .....	39	M.	1	3	Richards, .....	North'd, .....	Killed by an explosion of gas.
	4 Rudolph Rumpolskie, .....	Pole, .....	Miner, .....	50	M.	1	9	Pennsylvania, .....	North'd, .....	Killed by shot blown through pillar.
	6 Mike Veronic, .....	Austrian, .....	Miner, .....	28	S.	.....	.....	Cameron, .....	North'd, .....	Killed by coal from pillar rushing out on him.



TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.			Number of widows.			Name of Colliery.	County.	Nature and Cause of Accident in Brief.
					M.	M.	S.	1	3	4			
May	8 Antonio Gillette, .....	Italian, .....	Laborer, .....	30	M.			1			Natalie, .....	North'd., .....	Killed by a fall of coal.
	10 John Matta, .....	Austrian, .....	Miner, .....	40	M.			1			Entreprise, .....	North'd., .....	Killed by coal falling from face of breast.
	19 Adam Poshinsky, .....	Pole, .....	Miner, .....	30	S.				3		Reliance, .....	North'd., .....	Burned by powder. Died at Miners' Hospital April 23.
	20 Daniel Kramer, .....	American, .....	Miner, .....	33	M.			1		4	Richards, .....	North'd., .....	Killed by falling down pitch 60 feet.
	24 Anthony Savitch, .....	Lithuanian, .....	Miner, .....	25	S.			1			Cameron, .....	North'd., .....	Suffocated by an outburst of gas.
June	24 Julian Martincavitch, .....	Lithuanian, .....	Laborer, .....	25	S.			1			Cameron, .....	North'd., .....	Suffocated by an outburst of gas.
	29 Joseph Dunn, .....	American, .....	Driver, .....	21	S.			1			Royal Oak, .....	North'd., .....	Killed by falling under mine cars.
	6 Uriah Minnick, .....	American, .....	Miner, .....	59	M.			1		1	Short Mountain, .....	Dauphin, .....	Neck broken by a fall of coal.
	14 Wesley Fogick, .....	Russian, .....	Miner, .....	30	M.			1			Colbert, .....	North'd., .....	Killed by coal falling from rib of pillar.
	20 Walter S. Rickert, .....	American, .....	Driver, .....	19	S.			1			Williamstown, .....	Dauphin, .....	Killed; squeezed between car and prop.
July	25 Frank Shetalskie, .....	Pole, .....	Miner, .....	32	M.			1			Burnside, .....	North'd., .....	Killed; struck on head by a piece of rock falling down shaft.
	25 Simon Holleck, .....	Slovak, .....	Car loader, .....	42	M.			1		3	Williamstown, .....	Dauphin, .....	Killed by falling under railroad cars.
	6 John McGuinn, .....	American, .....	Miner, .....	31	S.						Fort Springs, .....	North'd., .....	Killed by coal falling from side of pillar.
	15 Walter Vendercruick, .....	Pole, .....	Laborer, .....	27	S.						Corbin, .....	North'd., .....	Killed by a fall of slate.
	19 Benjamin Brubaker, .....	American, .....	Miner, .....	33	M.						North Franklin, .....	North'd., .....	Killed by a fall of coal.
Aug.	25 James Duffy, .....	Irish, .....	Miner, .....	45	M.			1		3	Bear Valley, .....	North'd., .....	Killed by a fall of rock.
	25 James O'Neill, .....	Irish, .....	Miner, .....	26	M.			1			Short Mountain, .....	Dauphin, .....	Killed by a fall of rock.
	26 Robert Hunter, .....	German, .....	Laborer, .....	75	M.			1			Natalie, .....	North'd., .....	Killed; kicked by mule on stomach.
	17 Charles Remonco, .....	Hungarian, .....	Mucker, .....	23	M.			1		1	Bear Valley shaft, .....	Dauphin, .....	Killed; piece of rock fell from bucket, striking him on head.
	2 Mike Eko, .....	Russian, .....	Leader, .....	24	M.			1		1	Williamstown, .....	North'd., .....	Killed by being caught between mine car and shaft timber.
Sept. Oct.	2 Joseph Gezeltskie, .....	Pole, .....	Laborer, .....	23	S.						Burnside, .....	North'd., .....	Killed by piece of coal sliding from side of shaft.
	7 Arthur Grayson, .....	American, .....	Slate picker, .....	12	M.			1			Potts, .....	Columbia, .....	Killed by falling in breaker.
	1 Mattis Rozencranzky, .....	German, .....	Repairman, .....	41	M.			1			Fortis, .....	Columbia, .....	Neck broken by being caught by a rush of timber.
	13 John Washiefskie, .....	Pole, .....	Miner, .....	55	M.			1		2	Burnside, .....	North'd., .....	Killed by slate falling on him.
	27 George Fazley, .....	American, .....	Miner, .....	44	M.			1		5	Short Mountain, .....	Dauphin, .....	Killed by falling down manway.
Sept. Oct.	30 Jacob Markle, .....	American, .....	Scrapper, .....	14	S.			1			Hickory Ridge, .....	North'd., .....	Killed; caught in scraper line.
	25 Alfred James, .....	American, .....	Miner, .....	41	M.			1		1	Williamstown, .....	Dauphin, .....	Killed; squeezed by a piece of rock.
	31 Stiney Yacobskie, .....	Pole, .....	Miner, .....	32	M.			1		2	Stous, .....	North'd., .....	Killed; fell down manway.
Sept. Oct.	8 Paul Fush, .....	Hungarian, .....	Laborer, .....	24	S.						Mtvalley, .....	Columbia, .....	Killed by fall of top slate.

8	John Scovinskie, .....	Pole, .....	Miner, .....	40	M.	1	4	Cameron, .....	North'd, .....	Killed by a premature blast.
17	Peter Botack, .....	Pole, .....	Miner, .....	45	M.	1	....	Richards, .....	North'd, .....	Killed; fall of rock.
21	How Huntzinger, .....	American, .....	Runner, .....	19	S.	....	....	Reliance, .....	North'd, .....	Killed; caught between mine wagons.
23	John Neary, .....	American, .....	Laborer, .....	23	S.	....	....	Sioux, .....	North'd, .....	Smothered to death in Rice coal bin.
26	Michael Gallagher, ...	American, .....	Laborer, .....	23	S.	....	....	Logan slope, Cen- tralia, .....	Columbia, ....	Killed by slate falling on him.
Nov. 8	Eartley Connor, .....	American, .....	Dragline tender, .....	18	S.	....	....	Natale, .....	North'd, .....	Killed by being caught between scraper line and timber.
Dec. 4	Charles Fry, .....	American, .....	Chute tender, .....	14	S.	....	....	Hickory Ridge, .....	North'd, .....	Killed by falling on a revolving shaft.
4	Albert Trout, .....	American, .....	Miner, .....	29	M.	1	2	Midvalley, .....	Columbia, ....	Killed by a rush of coal in breast.
21	John Renco, .....	Slav, .....	Machine runner, .....	24	M.	1	1	Williamstown, ....	Dauphin, .....	Suffocated in wash shanty.
27	Edwin Tiley, .....	American, .....	Car loader, .....	21	S.	....	....	East, .....	Schuylkill, ...	Killed by being caught by a rope attached to a railroad car.
27	John Boylan, .....	American, .....	Slate picker, .....	14	....	....	....	Henry Clay, .....	North'd, .....	Injured Nov. 12 by having foot caught in rollers. Died Dec. 4th.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Seventh Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 9	Edward Llewellyn,	Welsh,	Bottom man,	28	S.	East,	Schuylkill,	Skull fractured by coal coming down slope.
11	John Woslavsch,	Pole,	Miner,	34	M.	Luke Fidler,	North'd,	Leg broken by fall of rock.
13	Wm. Maurice,	American,	Laborer,	20	S.	Natalie,	North'd,	Leg broken by fall of coal.
14	Wm. Laughlin,	Irish,	Miner,	35	S.	Continental shaft, Centra- lia,	Columbia,	Ribs broken by fall of coal.
17	John Deshna,	Pole,	Miner,	37	M.	Natalie,	North'd,	Burned by powder.
17	John W. Howels,	American,	Miner,	39	M.	Cameron,	North'd,	Leg and body crushed by fall of rock.
18	Charles Rehner,	American,	Laborer,	35	M.	Corbin,	North'd,	Leg broken by column pipe falling on him.
21	Frank Carter,	American,	Laborer,	29	S.	North Franklin,	North'd,	Leg broken by fall of coal.
21	Stephen Beebe,	German,	Miner,	28	M.	Notts,	North'd,	Back injured by coal falling on him.
22	William Paul,	Welsh,	Miner,	49	M.	Pennsylvania,	Schuylkill,	Back and legs crushed by fall of coal.
23	Anthony Miskell,	Lithuanian,	Laborer,	18	S.	St. Henry Clay,	North'd,	Leg broken by fall of coal.
23	James Furey,	American,	Driver,	40	M.	Cameron,	North'd,	Leg broken by mine cars.
Feb. 14	Amrose Shull,	American,	Miner,	17	M.	Cameron,	North'd,	Face and body cut by flying rock from blast.
14	Al Farrel,	American,	Laborer,	28	S.	Cameron,	North'd,	Face and body cut by flying rock from blast.
14	John Davis,	American,	Laborer,	25	M.	Cameron,	North'd,	Face and body cut by flying rock from blast.
23	James Augustine,	American,	Driver,	17	S.	Mt. Carmel,	North'd,	Leg broken between mine cars.
March 6	Frank Puch,	American,	Slate picker,	15	S.	Short Mountain,	Dauphin,	Arm broken while trying to put a rope around shaft.
7	Fousser Licup,	German,	Miner,	35	M.	Cameron,	North'd,	Cut by flying coal from a shot.
16	Roy Smith,	American,	Slate picker,	11	S.	Centralia,	Columbia,	Leg injured; caught in a belt.
19	Robert Smith,	English,	Miner,	42	S.	Williamstown,	Dauphin,	Back and chest injured by a fall of coal.
20	Frank Wushpolski,	Russian,	Miner,	39	M.	Corbin,	North'd,	Arm broken by a fall of slate.
22	Samuel Siskel,	American,	Miner,	27	M.	Continental, Centralia,	North'd,	Leg broken by falling coal.
27	Larry Eskraw,	Austrian,	Miner,	32	M.	Cameron,	North'd,	Eye knocked out and bruised about the body by premature blast.
27	George Condon,	Greek,	Laborer,	38	M.	Cameron,	North'd,	Face cut and bruised; explosion of blast.
28	Christ Gentile,	Austrian,	Miner,	39	S.	Pennsylvania,	North'd,	Bruised about chest and shoulder by premature blast.
April 1	Wm. Nash,	English,	Miner,	50	M.	Williamstown,	Dauphin,	Burned by gas.

1	Charles Herb.	American.	Spragger.	16	S.	Burnside.	North'd.	Leg broken; struck by an empty mine car.
2	Walter Penman.	American.	Driver.	17	S.	Pennsylvania.	North'd.	Squeezed between car and mule.
10	Frank Genoskie.	Pole.	Miner.	30	M.	Richards.	North'd.	Burned about hands and face by gas.
12	Wm. McCall.	American.	Driver.	17	S.	Sterling, Henry Clay.	North'd.	Leg broken; caught between spreader and bumper of wagon.
16	Robert Wagner.	American.	Door boy.	15	S.	Midvalley No. 2.	Columbia.	Arm broken; fell under car.
27	Alfred Zugley.	Pole.	Driver.	20	S.	Richards.	North'd.	Leg broken; caught between cars.
2	Al Pershing.	American.	Miner.	50	M.	Burnside.	North'd.	Hand broken by fall of coal.
3	Mike Vasevage.	Hungarian.	Miner.	29	M.	Pennsylvania.	North'd.	Burned on face and hands by gas.
3	Joseph Borkaski.	Slav.	Laborer.	40	M.	Williamstown.	Dauphin.	Leg broken by rush of ashes.
8	Charles Hower.	American.	Topman.	22	M.	Pennsylvania.	North'd.	Arm broken; struck by hoisting rope.
10	Oscar Wagner.	American.	Driver.	21	S.	Mt. Carmel.	North'd.	Hand mashed between mine cars.
14	John A. Miller.	American.	Miner.	23	M.	Williamstown.	Dauphin.	Face and hands burned by an explosion of gas.
14	James Whitty.	Irish.	Miner.	24	M.	Williamstown.	Dauphin.	Face and hands burned by an explosion of gas.
15	Alec Mordick.	Pole.	Driver.	28	M.	Pennsylvania.	North'd.	Hip broken by falling under car.
20	Patrick Costello.	Irish.	Miner.	50	M.	Burnside.	North'd.	Shoulder broken by a fall of coal.
27	Richard Powell.	American.	Slate picker.	13	M.	Williamstown.	Dauphin.	Leg broken by a fall of coal.
1	Stanley Godofsky.	Pole.	Miner.	40	M.	Pennsylvania.	North'd.	Leg broken by a fall of coal.
11	George Ruble.	Slav.	Miner.	30	M.	Cameron.	North'd.	Injured by a premature explosion.
11	Mike Seivinski.	Pole.	Miner.	35	M.	Locust Gap.	North'd.	Arm broken by fall of coal.
21	Florio Heiser.	Pole.	Miner.	23	S.	Richards.	North'd.	Burned by gas.
21	David Rowe.	American.	Miner.	38	M.	Cameron.	North'd.	Leg broken by falling down a chute.
22	George Davis.	Weish.	Miner.	38	M.	Williamstown.	Dauphin.	Leg broken by being struck by a pulley coming down slope.
3	Lott Hopper.	American.	Laborer.	36	M.	Enterprise.	North'd.	Cut and bruised by premature explosion.
3	Andy Shepard.	Hungarian.	Miner.	49	M.	Richards.	North'd.	Leg broken by a fall of coal.
6	Ray Depkins.	American.	Driver.	20	S.	Cameron.	North'd.	Shoulder broken between mine car and shaft of gangway.
12	Frank Godfieskie.	Pole.	Miner.	25	S.	Mt. Carmel.	North'd.	Leg broken by a piece of coal from a shot.
24	John Schu.	German.	Miner.	40	M.	Locust Spring.	North'd.	Hand blown off by dynamite which he held in his hand.
29	Valentine Perato.	Austrian.	Laborer.	42	M.	Pennsylvania.	North'd.	Leg broken by a fall of coal.
31	Francis Trivings.	American.	Driver.	19	S.	Richards.	North'd.	Leg broken by door of mine car.
10	Mike Sheets.	Pole.	Miner.	50	M.	Pennsylvania.	North'd.	Cut on head and face by coal from a blast.
16	Thos. Bolavaze.	Pole.	Miner.	45	M.	Potts.	Columbia.	Arm broken by a fall of coal.
27	John Omber.	American.	Breaker offer.	15	M.	Locust Spring.	North'd.	Left leg mashed; caught in a wheel in breaker.
27	Peter Castalen.	Pole.	Miner.	45	S.	Richards.	North'd.	Head injured and leg broken by a fall of top coal.
29	John Shemonskie.	Pole.	Machine runner.	26	S.	Scott shaft.	North'd.	Both eyes blown out by a premature blast.
29	Israel Jones.	Weish.	Laborer.	25	M.	Natalie.	North'd.	Leg broken by pillar of rock falling on him.
29	Patrick Kane.	American.	Breaker repairman.	25	S.	Centralla.	Columbia.	Thumb taken off while adjusting belt.
7	Arthur Neely.	American.	Slate picker.	17	S.	Henry Clay.	North'd.	Arm broken; fell from chute.
16	Geo. Pekarick.	Slav.	Car loader.	24	S.	Richards.	North'd.	Collar bone broken; fell from car.
16	John McGlynn.	American.	Driver.	22	S.	Sloux.	North'd.	Arm broken; fell from chute.
18	Frank Froye.	American.	Engineer.	17	S.	Sloux.	North'd.	Fell from a scaffold, breaking his arm.
24	John Cabora.	Hungarian.	Miner.	32	S.	Natalie.	North'd.	Injured by a piece of top coal falling on him.
25	Joseph Metcavadge.	Pole.	Miner.	29	S.	Sloux.	North'd.	Fell down manway; broke his arm.
26	Joseph Boyle.	American.	Laborer.	23	M.	Locust Spring.	North'd.	Injured internally; kicked by a mule.



TABLE V.—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct.								
4	Harry Paul, Sr., ....	American, ..	Miner, .....	50	W.	Big Mine Run drift, Centralia, .....	Columbia, ....	Back and hips sprained by fall of coal.
7	John Benfield, .....	American, ..	Miner, .....	38	M.	Centralia, .....	Columbia, ....	Injured by a piece of coal falling on him.
7	Frank Leopold, .....	Italian, .....	Laborer, .....	27	S.	Centralia, .....	Columbia, ....	Injured by a piece of coal falling on him.
9	Wm. Kinsel, .....	Pole, .....	Laborer, .....	36	M.	Centralia, .....	North'd, .....	Leg broken by mine wagons.
10	John Roscavich, .....	American, ..	Spiker, .....	12	M.	Centralia, .....	Columbia, ....	Leg broken by jumping from platform and being caught in conveyors.
11	John Timohisen, .....	Hungarian, ..	Car loader, ..	26	S.	Alaska, .....	North'd, .....	Injured; caught in scraper line.
12	Chas. Koppenshaw, .....	American, ..	Miner, .....	34	M.	Mt. Carmel, .....	North'd, .....	Foot broken by being caught by coal in chute.
14	Frank Pitskefskie, .....	Lithuanian, ..	Miner, .....	37	M.	Centralia, .....	Columbia, ....	Squeezed under fall of coal and rock.
21	Thos. J. Grifth, .....	English, .....	Miner, .....	37	M.	Williamstown, .....	Dauphin, ....	Leg broken by a fall of coal.
23	Jno. Stavinskie, .....	Pole, .....	Miner, .....	23	S.	Locust Gap, .....	North'd, ....	Cut about face and body by penitence explosion.
24	Jno. Sineavidge, .....	Pole, .....	Miner, .....	38	M.	Culbert, .....	North'd, ....	Burned by an explosion of gas.
24	Frank Vopchick, .....	Pole, .....	Miner, .....	45	M.	Culbert, .....	North'd, ....	Burned by an explosion of gas.
24	John Chachsky, .....	Pole, .....	Miner, .....	38	M.	Big Mountain, .....	North'd, ....	Burned by an explosion of gas.
5	Thos. Rafferty, .....	American, ..	Machine runner, ..	32	M.	North-shaft, .....	North'd, ....	Foot mangled by falling down breast.
6	Philip Koppshaver, .....	American, ..	Miner, .....	45	M.	Williamstown, .....	Dauphin, ....	Foot mangled by piece of rock falling on it.
6	Anthony Sieniske, .....	Pole, .....	Laborer, .....	18	S.	Mt. Carmel, .....	North'd, ....	Burned by an explosion of gas.
10	John Sisto, .....	Pole, .....	Laborer, .....	18	S.	Mt. Carmel, .....	North'd, ....	Burned by gas.
13	John Sieniske, .....	Pole, .....	Miner, .....	28	M.	Pennsylvania, .....	North'd, ....	Leg broken by fall of coal.
24	Nicholas Slonow, .....	Italian, .....	Asman, .....	30	M.	Mt. Carmel, .....	North'd, ....	Head and body bruised by cars.
9	Peter Augustowicz, .....	Pole, .....	Miner, .....	35	M.	Locust Spring, .....	North'd, ....	Head and body bruised by cars.
10	Wm. Krasne, .....	American, ..	Driver, .....	19	S.	Sloux, .....	North'd, ....	Arm broken; fell from a car.
11	Mike Petrilack, .....	Russian, .....	Laborer, .....	17	M.	Hickory Ridge, .....	North'd, ....	Arm broken; piece of rock fell on it.
12	Robert McHugh, .....	American, ..	Door boy, .....	15	M.	Locust Gap, .....	North'd, ....	Leg broken by a fall of coal.
18	Andrease Delcamp, .....	American, ..	Blacksmith, .....	16	M.	Alaska, .....	North'd, ....	Arm broken; fell from a mine.
20	John Otto, .....	American, ..	Bottom man, ..	40	S.	Sterling, .....	North'd, ....	Injured by cars coming down slope.
Nov.								
Dec.								



# Eighth Anthracite District.

SCHUYLKILL COUNTY.

Pottsville, Pa., February 26, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor to present herewith my annual report as Inspector of Mines of the Eighth Anthracite District for the year ending December 31, 1901.

The total production of coal for the year was 5,172,530 tons, which is 898,002 tons more than for the year 1900.

The number of fatal accidents during the year was thirty-five, which is three more than in 1900. Twenty-five of these occurred inside of the mines; forty per cent. of which were caused by falls of coal or roof; twenty per cent. by explosions of blasts, powder and dynamite; sixteen per cent. by falling down shafts and slopes; eight per cent. by explosions of gas and eight per cent. by mine cars. Of the ten fatal accidents that occurred outside of the mines, thirty per cent. were caused by mine cars and dumpers, and thirty per cent. by breaker machinery.

The report contains the usual statistical tables; also a detailed description of the fatal accidents, and a brief description of the most important improvements that have been or are being made in the mines.

Very respectfully,

JOHN MAGUIRE,  
Inspector of Mines.

## Production of Coal in Tons for 1901.

Philadelphia and Reading Coal and Iron Company,...	2,325,436
Lehigh Coal and Navigation Company, .....	849,217
Dodson Coal Company, .....	272,996
Truman M. Dodson Coal Company, .....	189,754
St. Clair Coal Company, .....	351,907
Beddall Bros., .....	92,110
D. Shepp Estate, .....	5,140

Dunkelberger & Young, .....	14,991
Leisenring & Co., .....	224,602
Lytle Coal Company, .....	282,305
Silverton Coal Company, .....	69,520
Davis Bros., .....	38,406
E. C. White & Co., .....	27,027
Mt. Hope Coal Company, .....	47,004
B. F. Williams, .....	15,250
East Ridge Coal Company, .....	81,363
Pine Hill Coal Company, .....	126,627
Losch, Moore & Co., .....	8,805
Gorman & Campion, .....	27,158
Slattery Bros., .....	11,854
Joseph H. Denning, .....	7,148
Whims & Hepner, .....	555
Buck Run Coal Company, .....	428
William Cook, .....	1,886
Stoddard Coal Company, .....	45,176
Middleport Coal Company, .....	11,183
Smith, Meyers & Co., .....	44,682
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Total, .....	5,172,530
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The Total Production was Made up as Follows.

Shipped by railroad to market, .....	4,520,435
Sold at the mines for local use, .....	79,328
Consumed to generate steam, .....	572,767
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Total, .....	5,172,530
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TABLE A—Showing Production of Coal, Number of Persons Employed by Each Company During the Year 1901, and the Average Number of Tons Produced per Employee.

Names of Companies.	Number of tons produced.	Number of persons employed.
Philadelphia and Reading Coal and Iron Company, .....	2,325,436	6,163
Lehigh Coal and Navigation Company, .....	849,217	1,577
Dodson Coal Company, .....	272,996	563
Truman M. Dodson Coal Company, .....	189,754	355
St. Clair Coal Company, .....	351,907	489
Beddall Bros., .....	92,110	176
D. Shepp Estate, .....	5,140	37
Dunkleberger & Young, .....	14,991	51
Lelsenring & Company, .....	224,602	506
Lytle Coal Company, .....	282,305	790
Silverton Coal Company, .....	69,520	200
Davis Brothers, .....	38,406	93
E. C. White & Co., .....	27,027	83
Mt. Hope Coal Company, .....	47,004	129
B. F. Williams, .....	15,250	168
East Ridge Coal Company, .....	81,363	253
Pine Hill Coal Company, .....	126,627	358
Losch, Moore & Company, .....	8,905	42
Gorman & Campion, .....	27,158	69
Slattery Brothers, .....	11,854	38
Joseph H. Denning, .....	7,148	30
Whims & Hepner, .....	555	17
Buck Run Coal Company, .....	428	55
William Cook, .....	1,886	12
Stoddard Coal Company, .....	45,176	39
Middleport Coal Company, .....	11,183	26
Smith, Meyers & Company, .....	44,682	36
Total, .....	5,172,530	12,655

Number of tons produced per employee, 408.7.

TABLE B—Number of Fatal Accidents and Tons of Coal Produced per Life Lost.

Names of Companies.	Number of fatal accidents.	Number of tons of coal produced per life lost.
Philadelphia and Reading Coal and Iron Company, .....	18	129,191
Lehigh Coal and Navigation Company, .....	4	212,304
Dodson Coal Company, .....	2	136,498
Truman M. Dodson Coal Company, .....	1	189,754
St. Clair Coal Company, .....	1	87,977
Beddall Brothers, .....	2	46,055
D. Shepp Estate, .....		5,140
Dunkleberger & Young, .....		14,991
Leisenring & Company, .....	1	224,602
Lytle Coal Company, .....	2	141,152
Silverton Coal Company, .....		69,520
Davis Brothers, .....		38,406
E. C. White & Company, .....		27,027
Mt. Hope Coal Company, .....	1	47,004
B. F. Williams, .....		15,250
East Ridge Coal Company, .....		81,363
Pine Hill Coal Company, .....		126,627
Losch, Moore & Company, .....		8,805
Gorman & Campion, .....		27,159
Slattery Brothers, .....		11,854
Joseph H. Denning, .....		7,148
Whimes & Hepner, .....		555
Buck Run Coal Company, .....		428
Wm. Cook, .....		1,886
Stoddard Coal Company, .....		45,176
Middleport Coal Company, .....		11,183
Smith, Meyers & Company, .....		44,682
Total and average, .....	35	147,786



TABLE C—Showing the Number of Fatal and Non-Fatal Accidents, and the Number of Tons of Coal Produced per Accident.

Names of Companies.	Number of accidents.	Number of tons of coal produced per accident.
Philadelphia and Reading Coal and Iron Company, .....	73	31,855
Lehigh Coal and Navigation Company, .....	14	60,658
Dodson Coal Company, .....	13	21,000
Treman M. Dodson Coal Company, .....	5	37,951
St. Clair Coal Company, .....	16	35,191
Beddall Brothers, .....	3	30,703
D. Shepp Estate, .....	1	5,140
Dunkleberger & Young, .....	1	14,991
Leisenring & Company, .....	4	56,150
Lytle Coal Company, .....	12	23,525
Silverton Coal Company, .....	7	9,931
Davis Brothers, .....	1	38,406
E. C. White & Company, .....	1	27,027
Mt. Hope Coal Company, .....	3	15,668
B. F. Williams, .....	1	15,220
East Ridge Coal Company, .....	1	81,363
Pine Hill Coal Company, .....	5	25,325
Losch, Moore & Company, .....	1	8,805
Gorman & Camplon, .....	1	27,158
Slattery Brothers, .....	1	11,854
Joseph H. Denning, .....	1	7,148
Whims & Hepner, .....	1	555
Buck Run Coal Company, .....	1	428
William Cook, .....	1	1,836
Stoddard Coal Company, .....	1	45,176
Middleport Coal Company, .....	1	11,183
Smith, Meyers & Company, .....	1	44,682
Total and average, .....	151	34,255

TABLE D—Classification of Accidents.

	Killed or fatally injured—inside.	Killed or fatally injured—outside.	Injured—inside.	Injured—outside.	Total killed and injured.
Falls of coal and roof, .....	10	1	37	1	47
Explosions of gas, .....	2	1	21	1	23
Explosions of blasts, .....	2	1	11	1	13
Explosions of powder, .....	1	1	2	1	3
Explosions of dynamite, .....	1	1	2	1	3
Fall of frozen dirt, .....	1	1	1	1	1
Mine cars and dumpers, .....	2	3	19	4	28
Itush of coal in battery, .....	1	1	4	1	5
Struck by falling timber at bottom of slope, .....	1	1	1	1	2
Falling down shafts, .....	3	1	1	1	3
Falling down slopes, .....	1	1	1	1	2
Falling down chutes and manways, .....	1	1	3	1	4
Explosions of boilers, .....	1	1	1	1	1
Bursting of fly wheel, .....	1	1	1	1	1
Breaker machinery, .....	1	1	1	1	5
Injured by mules, .....	1	1	3	1	4
Struck by trough thrown from breaker, .....	1	1	1	1	1
Miscellaneous, .....	1	1	3	2	6
Total, .....	25	10	105	11	151

TABLE E—Occupations of Persons Killed and Injured.

	Killed or fatally injured.	Injured.	Total.
Miners, .....	17	58	75
Laborers, inside, .....	4	18	22
Laborers, outside, .....	4	3	7
Fire bosses, .....	1	1	1
Leader bosses, .....	1	1	1
Loaders, .....	1	6	6
Battery starters, .....	1	3	3
Drivers, inside, .....	1	13	13
Drivers, outside, .....	1	2	2
Repairmen, .....	1	1	1
Tunnel contractor, .....	1	1	1
Door boys, .....	1	3	3
Fan boys, .....	1	1	1
Coal pusher, .....	1	1	1
Patcher, .....	1	1	1
Firemen, .....	2	2	2
Carpenters, inside, .....	1	1	1
Carpenters, outside, .....	1	1	1
Foreman on stripping, .....	1	1	1
Locomotive helper, .....	1	1	1
Slate pickers, .....	1	3	3
Headman, outside, .....	1	1	1
Attending elevators, scrapers and screens, .....	2	1	3
Total, .....	35	116	151

TABLE F—Nationalities of Persons Killed and Injured.

	Americans.	Irish.	Welsh.	English.	German.	Hungarians.	Poles.	Lithuanians.	Slavs.	Italian.	Austrian.	Russian.	Greek.	Total.
Killed, .....	14	1	1	1	1	1	2	2	1	2	1	1	1	35
Injured, .....	70	8	6	1	2	7	25	4	2	4	1	1	1	116
Total, .....	84	9	7	2	3	8	27	6	3	6	2	2	2	151

Table showing the quantity of air circulating through the mines of the Eighth Anthracite District at the end of the year 1901.

Name of Colliery.	Name of Operator.	Number of exhaust fans.	Number of forcing fans.	Number of splits of air.	Number of persons in the mines day and night.	Cubic feet of air at the intake.	Cubic feet of air at face of the work- ings.	Cubic feet of air at the outlet.
West Brookside, .....	Philadelphia and Reading Coal and Iron Co., .....	4	.....	25	831	260,700	50,387	268,000
Lytle, .....	Philadelphia and Reading Coal and Iron Co., .....	3	.....	18	550	148,444	96,488	148,614
Good Spring, .....	Philadelphia and Reading Coal and Iron Co., .....	1	.....	10	283	107,126	70,021	107,956
Orto, .....	Philadelphia and Reading Coal and Iron Co., .....	2	.....	12	297	133,800	85,200	141,600
Phoenix Park No. 3, .....	Philadelphia and Reading Coal and Iron Co., .....	12	.....	16	923	148,500	130,700	152,000
Richardson, .....	Philadelphia and Reading Coal and Iron Co., .....	12	.....	18	126	152,500	130,700	152,000
Glendower, .....	Philadelphia and Reading Coal and Iron Co., .....	12	.....	8	139	165,870	27,920	107,424
Silver Creek, .....	Philadelphia and Reading Coal and Iron Co., .....	12	.....	6	129	122,300	40,515	125,000
Eagle Hill, .....	Philadelphia and Reading Coal and Iron Co., .....	1	.....	9	561	122,300	56,400	143,000
Wadesville, .....	Philadelphia and Reading Coal and Iron Co., .....	1	.....	10	491	140,250	27,720	99,000
Colliery No. 8, .....	Lehigh Coal and Navigation Co., .....	1	.....	6	313	97,880	43,927	96,455
Colliery No. 10, .....	Lehigh Coal and Navigation Co., .....	1	.....	6	411	95,885	43,927	96,455
Colliery No. 11, .....	Lehigh Coal and Navigation Co., .....	1	.....	6	336	78,570	37,375	79,053
Colliery No. 12, .....	Lehigh Coal and Navigation Co., .....	1	.....	15	202	59,000	20,500	65,100
Morea, William, .....	Lehigh Coal and Navigation Co., .....	1	.....	2	200	57,650	20,400	72,100
Korea, .....	Lehigh Coal and Navigation Co., .....	1	.....	9	265	83,000	30,600	85,380
St. Clair, .....	Lehigh Coal and Navigation Co., .....	3	.....	9	218	66,900	10,600	70,000
Greenwood, .....	Lehigh Coal and Navigation Co., .....	2	.....	8	241	88,180	57,013	99,111
East Lehigh, .....	Lehigh Coal and Navigation Co., .....	1	.....	7	90	22,840	5,674	23,200
West Lehigh, .....	Bedall Brothers, .....	Natural,	.....	.....	.....	.....	.....	.....
Oak Hill, .....	Dunkleberger & Young, .....	.....	1	.....	2	17,000	18,000	.....
Lytle, .....	Lytle Coal Co., .....	2	.....	9	359	87,500	27,200	90,200
Silverton, .....	Lytle Coal Co., .....	12	.....	10	329	105,954	41,580	108,019
Ellsworth, .....	Silverton Coal Co., .....	12	.....	7	131	72,520	32,280	74,600
Howard, .....	Davis Brothers, .....	Natural,	.....	.....	39	.....	.....	.....
Mt. Hope, .....	E. C. White & Co., .....	1	.....	1	38	12,500	5,600	15,000
Williams, .....	Mt. Hope Coal Co., .....	.....	.....	.....	30	.....	.....	.....
East Ridge, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Liberty, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Bellevue, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Seaboard, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Jugular, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Buck Run, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Oakley, .....	East Ridge Coal Co., .....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	45	8	.....	.....	.....	.....	.....

### Descriptions of Fatal Accidents.

1. Thomas Leonard, sixteen years of age who was employed at attending shaker screens, was killed at the St. Clair colliery breaker on January 3. The schute boss missed him, and after searching for sometime, he found a coat wrapped around one of the driving shafts. The body of the boy was found under the breaker about thirty-five feet below the shaft, which was a considerable distance from his place of work. It was properly fenced, and why the boy went to it is not known.

2. James Motula, was killed at Wadesville colliery on January 22. He was skipping a pillar in the Seven Foot vein, which was ten feet thick. He had fired a shot in the middle bench which left a large piece of the top bench about two feet thick, hanging. He sounded this piece and thought it safe, and began to work under it when it fell and killed him.

3. Andrew Setlock, was fatally injured at the St. Clair colliery on January 31, by a fall of slate. He was working with a miner in a breast in the Buck Mountain. The roof had been a good hard rock up to within a few feet of the face, when a slate set in starting with a thin edge and increasing to one foot in thickness. They had two props under the slate, the upper one being seven feet from the face. While the laborer was crossing the breast near the face, a piece of slate fell on him injuring him so severely that he died shortly after reaching the hospital. He was employed to load coal, but as the colliery was idle on that day, the miner took him to work with him. He had been in the country only about four weeks and had worked only four days at the colliery.

4. Charles Wolf, was fatally injured at the Lincoln colliery on February 5. He was engaged at pushing dirt on schute from dirt bank to the scraper line for the washery. While in a stooping position, a lump of frozen dirt rolled down from the bank, injuring him so severely that he died in about half an hour.

5. Milton Koenig, was severely scalded by the bursting of a steam boiler at the Greenwood colliery on February 18, and died on February 28. He had started at 5.30 A. M. to get steam up before the colliery commenced to work at 7 A. M. He had some trouble to get water into the boiler and the water was low. He evidently turned the water in while the boiler was hot, causing it to explode with great force.

6. Simon Roberts, was killed at Kaska-William colliery on March 9. At the time of the accident a driver was hauling a dumper of dirt from under the breaker. Burkot Bromis, another laborer, who was away from his place of work, was standing carelessly against one of the breaker posts near the track. The driver and Simon Roberts.



who was some distance away, called to him to get out of the way, but he told them he was all right, and refused to move. The dumper caught him and Roberts went to his assistance. While doing so the driver took his mule to pull the dumper back, not knowing that Roberts was in the way. The dumper caught Roberts and injured him so severely that he died in a few minutes. Bromis, who was the direct cause of the accident, was only very slightly injured.

7. Anthony Lamon, was killed at Phoenix Park No. 3 colliery on March 16. He was employed at skipping pillar in the Diamond vein eight foot four inches thick on light pitch near the top of saddle. There was about two and a half feet of bone on top of the vein which was propped up. One of the props swung out allowing a piece to fall which caught Lamon, killing him instantly.

8. George Rukata, was killed at West Brookside colliery on March 22. He was employed on the east breaker tip dumping mine cars. While riding in to the dip on the front end of a loaded car, he fell off, the wheels passed over him killing him instantly.

9. Martin Romockoskie, was killed at the Lytle colliery on April 3. He was driving a heading through the pillar at the face of a finished breast and firing a shot, retreated into the heading below. Shortly after reaching there, he in some way ignited a full keg of powder, the explosion of which killed him instantly.

10. August Nehenkie, was fatally injured at West Brookside colliery on April 9. He had gone into the water level drift to commence work on the night shift. He stood about five feet inside of a loaded wagon with his back against a prop. The locomotive bumped some cars against the loaded one, which knocked it off the track, and the end of it caught him, injuring him so severely that he died on the 11th.

11. Victor Haertter, was instantly killed at West Brookside colliery on the night of May 3. He had drilled a hole in the bottom rock at the face of the gangway and was pushing a stick of dynamite into the hole when it exploded, killing him instantly. The fuse with exploder attached had not yet been put into the hole.

12. Stiney Basoe, was killed at Eagle Hill colliery on May 14. He was working in a breast in the Skidmore vein, five feet seven inches thick, pitching twenty degrees. Above the vein there was a bench of bone about one foot thick that was being propped up. About an hour before the accident occurred, the fire-boss visited the place and ordered him to put some more props up. He thought it was safe and fired a shot in the face first; then, while sinking a prop hole, a piece of the bone fell on him killing him.

13. William Klinger, was killed at West Brookside colliery on May 29. He was working at a battery, trying to start the stuff, which was blocked above it. He got inside of the battery and was



putting a shot of dynamite on a lump of slate when it started and caught him against the props injuring him so severely that he died before the men who went to his assistance could relieve him.

14. Joseph Myers was fatally burned by an explosion of powder at West Brookside colliery on June 26. He was making a cartridge in a heading and ignited the powder which also ignited about half a keg of powder. He died on July 4.

15. Miles Underkoffler, was killed at West Brookside colliery on July 11. He was working in the water level drift robbing pillars. The roof was bad and he was sinking a prop hole to put a prop under it when a piece of rock fell on him.

16. Thomas Bietsky was killed at Morea colliery on September 5. He was driving a schute in a pillar for the purpose of robbing it. After he had got a few feet above the heading, the outside part of the pillar ran and buried him killing him instantly.

17. Charles B. Conley was fatally injured at Colliery No. 11, L. C. & Nav. Co., September 5. He was letting a car down the plane on which fuel is hoisted for the shaft boilers, and ran the engine too fast. The fly wheel burst and he was struck by the pieces. He died the same evening.

18. James Hefflinger was killed at Colliery No. 12, L. C. & Nav. Co., on September 9. He was employed as a bell-boy, watching the scraper and elevator lines under the breaker to signal to the engineer if any thing went wrong with them. He fell into a scraper line and was dragged to the bottom of the elevators where he was killed.

19. John Marko was fatally injured at St. Clair colliery on September 24. He had fired a shot which failed to bring the coal down and he and his partner tried to bar it down, but could not. He commenced to work under it when it fell on him. He died on September 27.

20. Roland Williams was burned by an explosion of gas at Colliery No. 8, L. C. & Nav. Co., on September 27. He was working in a breast and had gone down to the gangway for brattice plank. On returning he went up with a naked light and when he got near the face, a piece of coal fell and brought down a small quantity of gas that had collected, which was exploded by his naked light. He died on October 2.

21. Joseph Venarskie was killed at Morea colliery on October 7. He was employed as a general laborer, but on the day of accident had been sent to assist the bottom man at the shaft. They were hoisting from the Seven Foot level and he opened the gate and walked into the shaft, while the cage was up, and fell to the bottom a distance of eighty-eight feet, and was killed.

22. John Neider was killed at Lincoln colliery on October 9. He

had started his team with a trip of loaded cars and was getting on the front end of the trip when he slipped and fell under the cars and was killed instantly.

23. George Phillips was killed at the Oak Hill colliery on October 10. He was firing a shot, which went off before he got away from it. He was found six feet from the face, and died in a few minutes.

24. Anthony Malouski was killed at the Greenwood colliery on October 11. He was working in a breast, and while nailing brattice on the manway, a piece of coal which he had left hanging fell on him, killing him instantly.

25. Michael Stone was killed at the Glendower colliery on October 18. At the time of the accident some men were taking scrap out of the breaker, and before throwing it down they sent a man down to see that no person was in the way. Stone went under the pockets and sat down to eat a lunch; he knew they were throwing the stuff down, but thought he was far enough out of the way, but a piece of it struck a tie and glanced under the pockets to where he was sitting, struck him on the head and he died in a few minutes.

26. George Freeman, a breaker boy was killed at the Mt. Hope colliery breaker on October 22. A short time before the accident the breaker machinery was stopped on account of a belt being off and the boy stood looking at them putting it on. A few minutes after the machinery started he was found wrapped around a shaft, away from his place of work. The shaft was fenced and he had no business near it.

27. Eugene Snyder was killed at West Brookside colliery on November 13. He was working in a breast. The fireboss visited the place during the forenoon and ordered him to pull a piece of loose slate down but he failed to do so. At 1 o'clock P. M., it fell on him, killing him instantly.

28 and 29. Irvin Stickler and William Neithamer were killed at West Brookside colliery on November 14, at 4.15 P. M., while the men were being hoisted up the No. 4 vein East Brookside slope, which is about 2,100 feet deep on an average dip of about sixty degrees, with double track. Stickler had been hoisted up the slope but had forgotten his safety lamp and got on the car to go down for it. In going over the knuckle at the top of the slope the front wheel mounted the guard rail, and it went down that way about five hundred feet, when the end of the car caught a gate stringer between the tracks at the No. 4 level. This held the car until the rope ran out when the side chains dropped from the hooks and the car started on a wild dash down the sixteen hundred feet of slope. Stickler was thrown out and fell near the bottom. Neithamer was at the bottom waiting to be hoisted and had gone up about fifteen feet so as to be first in getting

into the next car, and was killed by falling timber that the car knocked out on its way down.

30. William Yencofsky was killed at the Lytle colliery on November 15. He was riding up the shaft on the cage with nine other men after he had quit work in the evening. Instead of standing in on the cage where there was plenty of room, he stood near the end facing the side of the shaft. When about forty feet from the top of the shaft, which is fifteen hundred feet deep, some of the men saw him striking the shaft timber with his hands. Before they could lay hold of him he had fallen between the cage and the timber to the bottom of the shaft.

31. John Igo was burned by an explosion of gas at Silver Creek colliery on November 19, and died on December 11. He was working with his father, Thomas Igo, in a breast. They used naked lights, contrary to orders, and ignited a small quantity of gas at the face of the breast.

32. Joseph Nicholas had his leg crushed between the bumpers of cars at St. Clair colliery on December 4. The leg was amputated and he died on December 18. He had unhitched the chain at the top of the plane and was riding on the front end of the car, when it bumped against another car, and his leg was caught between the bumpers.

33. Adam Holas, a miner was killed at the Wadesville colliery on December 13, by a fall of coal. The vein was eight and one-half feet thick, on a pitch of twenty-four degrees, while taking up some bottom coal an overhanging wing of the top bench broke off from a slip in the rib and fell on him, killing him instantly.

34. George Eberts was killed at the No. 8 colliery of Lehigh Coal and Navigation Company on December 19, by falling down the shaft. There was about eleven feet of water on the bottom of the shaft and the cages had been taken off the coal hoisting compartments and tanks put on to hoist water. The safety gates had been removed to get the cages off and two chains had been put across the shaft in their stead. George Ebert went into the top of the shaft with other carpenters to build a trough to carry the water away. The top of the shaft is inside of a short tunnel from the surface. It was the first time he had been into it and he saw some lights on the other side of the shaft and got over the lower chain and under the upper one and walked into the shaft and fell to the bottom about eight hundred feet.

35. Charles Carticulas was killed at the Wadesville colliery on December 30. He was about to fire a shot and told his partner who started down the breast. When he got about thirty feet away, the shot went off and he found Carticulas' body about seven feet from the face of the breast, he having received the full force of the shot on the back of his head.



## Improvements.

During the year the usual improvements such as driving tunnels to keep up or increase the shipping capacity; the driving of airways and erection of additional fans for ventilation, the enlargement of breakers with additional machinery for the better preparation of coal, have been made; many additions have also been made to the pumping and steam plants.

The principal improvements are as follows:

At the Pine Hill colliery, operated by the Pine Hill Coal Company, the shaft is being sunk deeper to open a new lift below the present workings. It was sunk seventy-nine feet to December 31.

The Buck Run Coal Company has taken possession of the Woodside Colliery which was abandoned in 1900, and the water has been pumped out of the old Rohrersville slope. A new slope 366 feet deep on a dip of forty-five degrees has been opened on the Daniel vein about 3,700 feet east of the old Rohrersville slope, and to the same level. At the bottom of the slope a tunnel has been driven south 295 feet to the Crosby vein, and a tunnel driven north 210 feet to the Buck Mountain vein. A new breaker is being erected near this new slope.

The Lytle Coal Company has completed a new breaker to prepare coal mined at the new shaft. It has not yet been in operation. This breaker with the new shaft will be known as the Lytle colliery No. 2.

At the Kaska-William colliery, operated by the Truman M. Dodson Coal Company, the south tunnel on the shaft level has been driven about two hundred and seventy-five feet south of the Orchard vein; near the inner end of the tunnel, a shaft twelve feet by twelve feet eight inches in clear, divided into two compartments by a ten inch bunton, is being sunk to open new workings below the present inside slope level. Two drill holes have been bored from the surface five hundred and ten feet each, through which the ropes will run down to hoist from the new shaft, the material from which will be landed on the tunnel below and be hoisted to the surface in the old shaft, which is about eleven hundred and fifty feet north of the new inside shaft. The new shaft was sunk one hundred and fifteen feet in 1901.

A single track inside slope has been sunk on the bottom bench of the Mammoth vein 307 feet deep on dip of forty-five degrees, about five hundred feet west of the bottom of the main shaft, and a gangway started westward thirty-five feet above the bottom of the slope to work coal left above a small anticlinal above the tops of the breasts worked in the No. 1 inside slope.

The Philadelphia and Reading Coal and Iron Company is sinking a new shaft in the Heckschersville Valley to be called the Pine Knot colliery. The shaft is twelve feet eight inches wide east and west,

and thirty-one feet long north and south, clear of timber. This is divided into four compartments each seven feet by twelve feet eight inches. The two end compartments are subdivided by an eight inch buntin, making two compartments of six by seven feet each for hoisting water.

A new washery has been erected in the Heckschersville Valley by the same company, called the Anchor washery, which is used for re-screening the old dirt banks of the Anchor colliery, which was abandoned many years ago.

The new shaft being sunk at the West Brookside colliery near the East Brookside slope, was sunk four hundred and twenty-seven feet during the year.

At the Good Spring colliery, the No. 3 slope was sunk from the first to the second lift three hundred and seventy-eight feet on a dip of forty-eight degrees. A trial slope was also sunk on the No. 2 Lykens Valley vein three hundred and sixty-three feet deep on dip of thirty-nine degrees north of the No. 3 slope.

The air shaft of the Wadesville colliery was completed at a depth of six hundred and ninety-four feet to the Primrose vein, and a fan twenty-one feet in diameter installed.

The annual examination for mine foreman and assistant mine foreman was held at Pottsville, in June, 1901. The examining board was composed of John Maguire, Mine Inspector; Thomas Doyle, superintendent; David Tucker and William Dormer, miners.

The following were recommended for certificates: For mine foreman, Edward Jones, Morea; James Filer, Coaldale; Gethin Jenkins, Minersville. For assistant mine foreman, William A. Davis, Llewellyn; Lewis Howells, Llewellyn.



TABLE I—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Eighth Anthracite District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Phila. and Reading Coal and Iron Co.						
West Brookside,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Lincoln,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Good Spring,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Otto,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Phoenix Park No. 3,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Richardson,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Glendower,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Silver Hill,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Wagie Hill,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Pine Knot,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Kathia washery,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Anchor washery,.....	Schuylkill,.....	R. C. Luther,.....	Pottsville,.....	John Veith,.....	Pottsville,.....	Philadelphia & Reading.
Lehigh Coal & Navigation Co.						
Colliery No. 8,.....	Schuylkill,.....	W. D. Zehner,.....	Lansford,.....	Baird Snyder, Jr.,.....	Lansford,.....	Central R. R. of N. J.
Colliery No. 10,.....	Schuylkill,.....	W. D. Zehner,.....	Lansford,.....	Asst. Supt. T. M. Whildin, Gen. Inside Foreman. }	Lansford,.....	Central R. R. of N. J.
Colliery No. 11,.....	Schuylkill,.....	W. D. Zehner,.....	Lansford,.....		Lansford,.....	Central R. R. of N. J.
Colliery No. 12,.....	Schuylkill,.....	W. D. Zehner,.....	Lansford,.....		Lansford,.....	Central R. R. of N. J.
Dodson Coal Co.						
Morea,.....	Schuylkill,.....	E. L. Bullock,.....	Audenreid,.....	W. J. Hays,.....	Morea,.....	Lehigh Valley,.....
Truman M. Dodson Coal Co.						
Kaska-William,.....	Schuylkill,.....	E. L. Bullock,.....	Audenreid,.....	T. C. Reese,.....	Kaska,.....	Philadelphia & Reading.
St. Clair Coal Co.						
St. Clair,.....	Schuylkill,.....	.....	.....	Wm. T. Smyth,.....	St. Clair,.....	Philadelphia & Reading.
Reddall Bros.						
Greenwood No. 13,.....	Schuylkill,.....	.....	Tamaqua,.....	M. A. Gerber,.....	Tamaqua,.....	Central R. R. of N. J.
D. Shapp Estate.						
East Lehigh,.....	Schuylkill,.....	E. M. B. Shapp,.....	Tamaqua,.....	.....	.....	Philadelphia & Reading.
Dunkleberger & Young.						
West Lehigh,.....	Schuylkill,.....	.....	.....	John Young,.....	Tamaqua,.....	Philadelphia & Reading.
Laisening & Co.						
Oak Hill,.....	Schuylkill,.....	.....	.....	William Schwenk,.....	Minersville,.....	Philadelphia & Reading.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Lytle Coal Co.	Schuylkill.....	Morris Williams..	Wilkes-Barre, .....	Arthur Kennedy, ...	Minersville, .....	Pennsylvania.
Silverton Coal Co.	Schuylkill.....			Gomer E. Jones, ....	Llewellyn, .....	Philadelphia & Reading.
Davis Bros.	Schuylkill.....	John H. Davis.....	St. Clair, .....			Philadelphia & Reading.
Howard, E. C. White & Co.	Schuylkill.....	Richard White.....	Pottsville, .....			Philadelphia & Reading.
Mt. Hope Coal Co.	Schuylkill.....	S. D. Kynor, .....	Pottsville, .....			Philadelphia & Reading.
B. F. Williams.	Schuylkill.....			T. H. Griffith, .....	Pottsville, .....	Philadelphia & Reading.
East Ridge Coal Co.	Schuylkill.....	B. E. Kingsley, ....	Minersville, .....			Philadelphia & Reading.
Pine Hill Coal Co.	Schuylkill.....			Richard J. Uron, ....	Minersville, .....	Pennsylvania.
Losch & Moore.	Schuylkill.....	Wm. Moore, .....	Tremont, .....			Philadelphia & Reading.
Gorman & Champion.	Schuylkill, ..			Edward Gorman, ....	Tuscarora, .....	Philadelphia & Reading.
Slattery Bros.	Schuylkill.....			Daniel Slattery, ....	Tuscarora, .....	Philadelphia & Reading.
Joseph H. Denning	Schuylkill.....	Joseph H. Denning, ..	St. Clair, .....			No railroad to mine.
Whims & Hepner.	Schuylkill.....			James J. Whims, ....	St. Clair, .....	Coal hauled to Ellsworth colliery, P. & R. siding.
Buck Run Coal Co.	Schuylkill.....	William R. Wilson, ..	Minersville, .....			Philadelphia & Reading.

William Cook.	Schuylkill,....	William Cook, .....	Tuscarora, .....	.....	.....	Coal hauled to P. & R. siding at Tuscarora.
Oakley, .....	Schuylkill,....	.....	.....	D. H. McGee, .....	Minersville, .....	Philadelphia & Reading.
Stoddard Coal Co. Wolf Creek washery, .....	Schuylkill,....	.....	.....	James S. Kerns, ....	Middleport, .....	Philadelphia & Reading.
Middleport Coal Co. Middleport washery, .....	Schuylkill,....	.....	.....	Charles Meyers, .....	Pottsville, .....	Philadelphia & Reading.
Smith, Myers Co. Meyers washery, .....	Schuylkill,....	Henry Meyers, ....	Minersville, .....	.....	.....	.....



Truman M. Dodson Coal Co.	Schuylkill,.....	161,321	27,320	913	189,754	4,259	355	1	4	2,600	27,150	31
Kaska-William, .....												
St. Clair Coal Co.	Schuylkill,.....	294,854	55,072	2,031	351,997	212.2	499	4	6	6,881	6,511	53
Reddall Brothers.												
Greenwood No. E., .....	Schuylkill,.....	73,404	4,000	8,706	82,110	224.8	176	2	1	775	7,690	17
D. Shepp Estate.												
East Lehigh, .....	Schuylkill,.....	2,399	220	2,521	5,140	169.8	37	.....	.....	87	1,025	4
Junkleberger & Young.												
West Lehigh, .....	Schuylkill,.....	10,469	700	3,822	14,991	220	51	.....	.....	75	2,700	9
Leisenring & Co.												
Oak Hill, .....	Schuylkill,.....	290,896	22,000	1,766	294,042	212.2	596	1	3	4,166	27,850	47
Lytle Coal Co.												
Lytle, .....	Schuylkill,.....	233,673	44,678	3,954	282,545	212.8	790	2	10	5,429	64,225	79
Silverton Coal Co.												
Silverton, .....	Schuylkill,.....	58,205	10,350	365	69,529	184.3	200	.....	7	700	15,090	22
Davis Brothers.												
Ellsworth, .....	Schuylkill,.....	35,352	2,500	354	38,406	282.5	53	.....	.....	.....	18,000	6
E. C. White & Co.												
Howard, .....	Schuylkill,.....	22,799	3,650	578	27,627	199.8	83	.....	.....	515	450	6
Mt. Hope Coal Co.												
Mt. Hope, .....	Schuylkill,.....	37,263	5,000	4,741	47,004	173	129	1	2	1,964	6,850	14
B. F. Williams.												
Williams, .....	Schuylkill,.....	9,897	2,500	2,853	15,250	60	168	.....	1	250	4,000	12
East Ridge Coal Co.												
East Ridge, .....	Schuylkill,.....	74,108	7,200	55	81,308	165.7	253	.....	1	2,062	4,623	22
Pine Hill Coal Co.												
Pine Hill, .....	Schuylkill,.....	118,129	7,300	1,188	126,627	186.4	358	.....	5	3,927	17,300	18
Losch, Moore & Co.												
Lorberry, .....	Schuylkill,.....	6,989	\$56	960	8,805	65.7	42	.....	.....	96	60	7
Gorman & Campion.												
Bell, .....	Schuylkill,.....	25,688	1,460	.....	27,158	217	60	.....	.....	562	400	6
Slattery Brothers.												
Tuscarora, .....	Schuylkill,.....	11,248	225	281	11,854	192	38	.....	.....	250	840	5
Joseph H. Denning.												
Sebastopol, .....	Schuylkill,.....	.....	250	6,898	7,148	246	30	.....	.....	12	300	10



TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Jugular, .....	Schuylkill, .....	565	50	.....	555	12	17	.....	.....	.....	.....	5
Buck Run, .....	Schuylkill, .....	.....	400	28	428	.....	55	.....	.....	23	522	5
Oakley, .....	Schuylkill, .....	1,116	255	545	1,866	151.5	12	.....	.....	90	160	2
Wolf Creek washery, .....	Schuylkill, .....	41,622	3,400	134	45,156	170.4	39	.....	.....	.....	.....	3
Middleport washery, .....	Schuylkill, .....	10,732	250	140	11,132	127	26	.....	.....	.....	.....	4
Smith, Meyers & Co. washery, .....	Schuylkill, .....	43,982	1,400	.....	44,882	138	36	.....	.....	.....	.....	3
Grand total, .....	.....	1,529,435	572,767	79,928	5,172,550	*187.63	12,655	35	116	71,582	637,755	1,357

\*Average.



TABLE III.—Showing the number of each class of employees at each colliery in the Eighth Anthracite District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.								
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Poor boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.		Total outside.
Philadelphia and Reading Coal and Iron Co.	Schuylkill.	6	11	275	192	52	13	282	831	8	14	50	121	3	187	388	1,219
West Brookside.	Schuylkill.	4	4	236	96	43	.....	167	550	2	11	20	66	2	88	208	758
Lincoln.	Schuylkill.	2	5	175	35	10	6	107	283	2	7	20	95	2	89	215	498
Good Spring.	Schuylkill.	2	5	171	55	20	10	167	370	2	8	23	71	2	109	215	585
Orto.	Schuylkill.	1	4	116	28	6	6	63	223	1	1	10	55	2	46	119	342
Phoenix Park No. 3.	Schuylkill.	1	4	58	14	8	6	35	126	1	1	2	29	2	48	118	214
Richardson.	Schuylkill.	1	4	74	24	17	6	73	189	1	8	26	75	2	98	219	409
Chenoweth.	Schuylkill.	1	4	74	24	17	6	73	189	1	8	26	75	2	98	219	409
Wedge Creek.	Schuylkill.	2	11	250	89	30	8	171	661	2	10	23	120	2	169	286	724
East Hill.	Schuylkill.	1	8	267	46	25	6	138	431	2	9	23	131	2	96	263	714
Wadestown.	Schuylkill.	1	8	175	66	13	7	68	315	1	6	19	54	2	86	198	471
Pine Knot.	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	31	32	32
Kahnia washery.	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	5	1	19	23	23
Anchor washery.	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....	21	31	31
Total and average.	.....	21	59	1,757	615	224	67	1,174	3,947	20	89	254	842	24	887	2,216	6,163
Lehigh Coal and Navigation Co.	Schuylkill.	2	4	163	26	34	20	212	411	1	9	14	76	.....	95	195	606
Colliery No. 8.	Schuylkill.	1	1	4	77	56	16	146	333	1	6	22	79	.....	70	178	514
Colliery No. 10.	Schuylkill.	1	1	4	70	23	24	130	262	1	8	26	70	.....	81	186	448
Colliery No. 11.	Schuylkill.	1	3	52	14	10	5	114	201	1	4	14	54	.....	36	109	369
Colliery No. 12.	Schuylkill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total and average.	.....	5	15	392	129	104	51	602	1,209	4	27	76	279	.....	98	608	1,877

Maret, .....	Schuylkill, .....	1	2	84	69	23	7	74	260	1	17	19	105	5	156	373	563
Truman M. Jackson Coal Co.	Schuylkill, .....	1	2	99	28	14	2	59	218	2	6	19	60	2	48	137	335
Kaska-William, .....	Schuylkill, .....	2	2	136	60	27	31	24	241	1	9	26	37	3	172	248	489
St. Clair, .....	Schuylkill, .....	1	1	42	14	11	3	18	99	1	5	4	36	2	38	86	176
Bedall Brothers	Schuylkill, .....	1	1	8	2	3	.....	.....	15	1	1	2	10	2	6	22	37
P. Shupp Estate	Schuylkill, .....	1	1	13	3	3	1	3	27	1	2	4	8	2	7	24	51
East Lehigh, .....	Schuylkill, .....	1	5	225	52	57	9	42	379	1	7	18	44	11	66	147	506
Dunkleberger & Young	Schuylkill, .....	2	6	209	103	36	9	115	52	2	28	38	78	8	116	270	789
Leisenring & Co.	Schuylkill, .....	2	3	80	10	22	3	11	131	1	7	9	18	3	31	69	200
Oak Hill, .....	Schuylkill, .....	1	1	12	18	4	.....	3	39	1	2	3	16	2	39	54	93
Lytle, .....	Schuylkill, .....	1	1	26	4	3	.....	3	38	1	2	6	12	2	22	45	83
Silverton Coal Co.	Schuylkill, .....	1	2	2	2	5	.....	18	30	2	5	20	20	2	50	99	123
Silverton, .....	Schuylkill, .....	1	2	72	25	5	3	20	123	1	4	6	.....	2	27	40	168
Javis Brothers	Schuylkill, .....	1	1	65	40	7	2	8	124	1	6	9	46	3	64	129	253
Ellsworth, .....	Schuylkill, .....	1	3	106	28	9	3	83	233	1	4	8	58	3	51	125	388
E. C. White & Co.	Schuylkill, .....	1	.....	16	6	3	.....	.....	26	1	1	3	4	1	6	16	42
Howard, .....	Schuylkill, .....	1	.....	19	4	3	.....	8	35	1	2	2	20	2	7	24	69
Mt. Hope Coal Co.	Schuylkill, .....	1	.....	15	5	3	.....	1	25	1	1	2	5	1	3	13	38
Mt. Hope, .....	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Williams, .....	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Ridge Coal Co.	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Ridge, .....	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pine Hill, .....	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Losch, Moore & Co.	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gorman & Campion	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bell, .....	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Slatery Brothers	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuscarora, .....	Schuylkill, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE III.—Continued.

Names of Operators and Offices.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand Total, inside and outside.	
		Inside foremen or mine bosses.	Pit bosses.	Mine.	Mine's laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, and clerks.	All other employees.		Total outside.
Joseph H. Denning.	Schuykill.....	1		2	5				9	1		1	3	1	15	21	31
Schuykill.....	Schuykill.....			1	6				7	1	1	1	4		2	10	17
Whitins & Hepler.	Schuykill.....																
Jugular.	Schuykill.....																
Back Run Coal Co.	Schuykill.....	1	1	8	2	4		6	22	1	2	4		2	21	23	55
Back Run.	Schuykill.....																
Oakley.	Schuykill.....	1		4		1		1	7	1		1	2		1	5	12
William Cook.	Schuykill.....																
Stoddard Coal Co.	Schuykill.....									1	1	5	3	1	28	39	39
Wash Creek washery.	Schuykill.....																
Middleport Coal Co.	Schuykill.....									1		1	2	1	21	25	26
Middleport washery.	Schuykill.....																
Smith, Mayers & Co.	Schuykill.....									1	2	5	4		23	35	36
Mayers washery.	Schuykill.....																
Total and average.		30	160	3,298	1,290	530	171	2,331	7,750	52	232	547	1,536	53	2,283	4,945	12,655





TABLE IV.—List of fatal accidents that occurred in and about the mines of the Eighth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	2 Thomas Leonard, ...	English, .....	Attdg shakers, .....	16	S.	1	6	St. Clair, .....	Schuylkill.	Killed by being caught by revolving shaft.
	23 James Motula, ...	Italian, .....	Miner, .....	42	M.	1	2	Wadsworth, .....	Schuylkill.	Killed by a fall of coal.
Feb.	21 Andrew Setlock, ...	Polish, .....	Laborer, .....	41	M.	1	2	St. Clair, .....	Schuylkill.	Fatally injured by a fall of slate.
	3 Charles Wolf, .....	American, .....	Laborer, .....	22	M.	1	2	Lindon, .....	Schuylkill.	Killed by a piece of frozen dirt rolling on him on dirt bank.
	18 Milton Koehnig, .....	American, .....	Fremont, .....	23	M.	1	2	Greenwood, .....	Schuylkill.	Scalded by steam from a boiler explosion.
March	9 Simon Roberts, .....	Polish, .....	Laborer, .....	26	S.	1	2	Kaska-William, .....	Schuylkill.	Killed by a fall of coal.
	16 Anthony Lamon, ...	Lithuanian, .....	Miner, .....	41	M.	1	2	Phoenix Park, .....	Schuylkill.	Killed by being caught between a dirt breaker and post.
April	22 George Ruketa, ...	Hungarian, ...	Laborer, .....	28	M.	1	2	West Brookside, .....	Schuylkill.	Killed by a fall of slate.
	3 Martin Ronoschski, ...	Lithuanian, ...	Miner, .....	50	M.	1	5	Lytle, .....	Schuylkill.	Killed by explosion of a keg of powder.
May	9 August Nehenkie, ...	German, .....	Laborer, .....	24	S.	1	1	West Brookside, .....	Schuylkill.	Fatally injured by being caught between a car and prop.
	3 Victor Haertter, ...	American, ...	Miner, .....	27	M.	1	1	West Brookside, .....	Schuylkill.	Killed by explosion of dynamite.
	14 Stacey Basse, .....	Polish, .....	Miner, .....	30	S.	1	2	Eagle Hill, .....	Schuylkill.	Killed by a fall of bone.
June	29 William Klinger, ...	American, ...	Battery starter, .....	27	S.	1	2	West Brookside, .....	Schuylkill.	Killed by a rush of stuff inside of battery.
July	26 Joseph Myers, .....	American, ...	Miner, .....	29	M.	1	1	West Brookside, .....	Schuylkill.	Fatally burned by explosion of powder.
Aug.	11 Miles Underkofler, ...	German, .....	Miner, .....	36	M.	1	8	Morse, .....	Schuylkill.	Killed by a piece of rock falling on him.
Sept.	3 Thomas Miesky, ...	Polish, .....	Miner, .....	36	M.	1	8	No. 11 col., .....	Schuylkill.	Killed by a fall of coal.
	3 Charles E. Corley, ...	American, ...	Fremont, .....	22	S.	1	2	No. 11 col., .....	Schuylkill.	Killed by being struck by piece of fly wheel.
	9 James Hedflinger, ...	German, .....	U-ll boy, .....	13	S.	1	2	No. 12 col., .....	Schuylkill.	Killed by being caught in elevators in the breaker.
Oct.	21 John Marko, .....	Polish, .....	Miner, .....	50	M.	1	2	St. Clair, .....	Schuylkill.	Skull fractured by a fall of coal.
	27 Roland Williams, ...	Wash., .....	Miner, .....	45	M.	1	2	Colliery No. 8, .....	Schuylkill.	Burned by an explosion of gas.
	9 Joseph Venarskie, ...	Polish, .....	Laborer, .....	23	M.	1	2	Morse, .....	Schuylkill.	Killed by falling down shaft.
	9 John Seider, .....	American, ...	Driver, .....	18	S.	1	2	Lindon, .....	Schuylkill.	Killed by falling under ears.
	10 George Phillips, ...	American, ...	Miner, .....	32	M.	1	4	Oak Hill, .....	Schuylkill.	Killed by a shot.
	11 Anthony Malowski, ...	Polish, .....	Miner, .....	35	M.	1	2	Greenwood, .....	Schuylkill.	Killed by a fall of coal.
	18 Michael Stone, .....	Polish, .....	Laborer, .....	21	S.	1	2	Glendower, .....	Schuylkill.	Killed; struck by old iron thrown from breaker.

	22	George Freeman, ...	American, ....	Feeding screen	15	S.	.....	Mt. Hope, .....	Schuylkill.	Killed; caught in a revolving shaft in the break.
Nov.	12	Eugene Snyder, .....	American, ....	Minor, .....	95	W.	.....	West Brookside, ...	Schuylkill.	Killed by a fall of slate.
	13	Irvin Stickler, .....	American, ....	Minor, .....	24	W.	.....	West Brookside, ...	Schuylkill.	Killed by falling down the slope.
	14	William Neithamer, ...	American, ....	Reichman, ...	26	W.	.....	West Brookside, ...	Schuylkill.	Killed at the bottom of slope by timber.
	15	William Vencodsky, ...	Polish, .....	Lorier, .....	26	W.	.....	Lytle, .....	Schuylkill.	Killed by falling down the shaft.
	16	John Ligo, .....	American, ....	Minor, .....	28	W.	.....	Silver Creek, .....	Schuylkill.	Burned by an explosion of gas.
Dec.	17	Joseph Nicholas, .....	Italian, .....	Headman, .....	21	M.	.....	St. Clair, .....	Schuylkill.	Lee crushed between cars.
	18	Adam Holas, .....	Slav, .....	Minor, .....	32	M.	.....	Wadesville, .....	Schuylkill.	Killed by a fall of coal.
	19	George Eberts, .....	American, ....	Carpenter, ...	21	S.	.....	Colliery No. 8, .....	Schuylkill.	Killed by falling down the shaft.
	30	Charles Curticulas, .	Pole, .....	Minor, .....	33	M.	.....	Wadesville, .....	Schuylkill.	Killed by premature explosion of a blast.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Eighth Anthracite District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	1 J. F. Szyk, Jr.	Hungarian	Miner	25	✓	Mapes, Oak Hill	Schuylkill	Foot severely injured by a fall of rock.
	2 George Vester	Lithuanian	Miner	36	✓		Schuylkill	Foot and hand burned by an explosion of gas.
	3 Anthony Induski	Hungarian	Driver	17	✓	Eagle Hill	Schuylkill	Leg and hand broken by falling under a cage.
	4 Peter Lemblavage	Pole	Miner	26	✓	Kasha-William	Schuylkill	Leg broken by a fall of slate.
	5 William Banachka	Lithuanian	Miner	27	✓	Silver Creek	Schuylkill	Burned by an explosion of gas.
	6 William Lepel	American	Driver	16	✓	Phoenix Park No. 3	Schuylkill	Severely injured by falling in front of mine car.
	7 Charles J. Jr.	American	Laborer	41	M.	West Brookside	Schuylkill	Arm broken; struck by hammer.
	8 William J. Jones	American	Patcher	16	✓	Mapes	Schuylkill	Arm broken while trying to get on cage.
	9 Thomas P. P. P.	American	Door boy	16	✓	Silver Creek	Schuylkill	Foot injured between cage.
	10 John Conroy	Hungarian	Miner	40	M.	Silver Creek	Schuylkill	Severely injured by explosion of dynamite.
Feb.	1 Walter Leonard	Irish	Loader	22	M.	Silver Creek	Schuylkill	Severely injured by explosion of dynamite.
	2 George K. K.	American	Miner	34	M.	West Brookside	Schuylkill	Severely injured by a fall of coal.
	3 William A. N. S.	American	Miner	38	M.	West Brookside	Schuylkill	These three men were killed by an explosion of gas.
	4 Henry Lemblavage	American	Miner	27	M.	Silver Creek	Schuylkill	
	5 John Carlisle	Pole	Miner	27	M.	Mapes	Schuylkill	
	6 Peter Hayes	Pole	Miner	31	M.	Mapes	Schuylkill	
	7 Charles Kussel	Pole	Miner	29	M.	Colliery No. 12	Schuylkill	Severely injured by a fall of coal.
	8 William Fritz	American	Miner	40	M.	Colliery No. 12	Schuylkill	Klimski and Fritz were killed by an explosion of gas.
	9 James Hamlin	American	Miner	25	✓	Colliery No. 12	Schuylkill	Hamm and Boyle were killed in the same place in evening.
	10 William J. Jones	American	Laborer	25	✓	Colliery No. 12	Schuylkill	Head severely injured by a fall of slate.
March	1 William J. Jones	American	Starter	22	✓	Richardson	Schuylkill	Severely injured by flying coal from a shot.
	2 Louis Barst	American	Miner	26	M.	Colliery No. 16	Schuylkill	Leg broken by a fall of coal.
	3 Edward Quirk	American	Miner	45	M.	Richardson	Schuylkill	Shin fractured by a fall of coal.
	4 John W. W. S.	Lithuanian	Laborer	25	✓	Oak Hill	Schuylkill	Collar bone broken by a fall of coal.
	5 Joseph Lyons	American	Miner	35	✓	Lenox	Schuylkill	Collar bone broken by shot.
	6 W. H. Kautz	American	Laborer	27	M.	West Brookside	Schuylkill	Severely injured by being run over by cage.
	7 John McNeal	American	Laborer	46	M.	West Brookside	Schuylkill	Arm broken; fell down a chute.
	8							
	9							
	10							

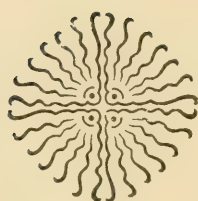
April	10	Philip Wertz.	.....	American.	.....	Miner.	.....	25	S. S.	Lincoln.	.....	Schuykill.	Collar bone broken while starting coal.
	12	Simon Kibbel.	.....	Pole.	.....	Miner.	.....	26	M.	Kaska-William.	.....	Schuykill.	Head injured by coal from a shot.
	13	Frank Buchel.	.....	American.	.....	Miner.	.....	27	M.	West Brookside.	.....	Schuykill.	Back injured by a fall of rock.
	23	Joseph Norris.	.....	Pole.	.....	Miner.	.....	28	M.	Lytle.	.....	Schuykill.	Turned by an explosion of gas.
	23	Charles Tyner.	.....	Pole.	.....	Miner.	.....	29	M.	Lytle.	.....	Schuykill.	
	23	Tommy Jose.	.....	Italian.	.....	Miner.	.....	30	M.	Lytle.	.....	Schuykill.	
	24	Charles Zolinski.	.....	Polishman.	.....	Miner.	.....	31	M.	Lytle.	.....	Schuykill.	Leg broken by a fall of coal.
	24	George Higgins.	.....	Irish.	.....	Driver.	.....	32	S.	St. Clair.	.....	Schuykill.	Severely injured by falling in front of cars.
	25	George Reimohl.	.....	American.	.....	Starter.	.....	44	M.	West Brookside.	.....	Schuykill.	Head and hand injured by shot.
	26	David Isaly.	.....	American.	.....	Slate picker.	.....	43	M.	Colliery No. 10.	.....	Schuykill.	Leg broken by a seven shaft.
May	27	Joseph Zellers.	.....	American.	.....	Miner.	.....	31	M.	West Brookside.	.....	Schuykill.	Leg broken by a fall of coal.
	30	Harry Jones.	.....	Welsh.	.....	Miner.	.....	35	M.	Morea.	.....	Schuykill.	Arm broken by coal at a battery.
	1	Harry Warner.	.....	American.	.....	Miner.	.....	38	M.	Phoenix Park No. 3.	.....	Schuykill.	Arm broken by a fall of coal.
	10	William Carlin.	.....	American.	.....	Miner.	.....	48	M.	Eagle Hill.	.....	Schuykill.	Wrist and hand dislocated.
	15	John Fisher.	.....	American.	.....	Laborer.	.....	50	M.	Lindholm.	.....	Schuykill.	Wrist dislocated; caught between cars.
	17	Steve Bosh.	.....	Hungarian.	.....	Miner.	.....	27	S.	St. Clair.	.....	Schuykill.	Back injured by a fall of coal.
	18	Mich. Peterson.	.....	Pole.	.....	Miner.	.....	33	S.	Lytle.	.....	Schuykill.	Injured by falling down a runway.
	18	Edward Connolly.	.....	Irish.	.....	Miner.	.....	35	S.	Eagle Hill.	.....	Schuykill.	Injured by being kicked by a mule.
	18	John Mesek.	.....	Slovak.	.....	Miner.	.....	39	S.	St. Clair.	.....	Schuykill.	Severely injured by car jumping track.
	18	John Smolodsky.	.....	American.	.....	Laborer.	.....	42	S.	Eagle Hill.	.....	Schuykill.	Injured by coal from a shot.
June	18	John Farrell.	.....	American.	.....	Laborer.	.....	36	S.	Otto.	.....	Schuykill.	Arm broken by a fall of slate.
	20	Pat Reilly.	.....	American.	.....	Laborer.	.....	32	S.	Morea.	.....	Schuykill.	Leg injured by jumping on a blasting needle.
	21	Chas. Boone.	.....	American.	.....	Miner.	.....	33	M.	West Brookside.	.....	Schuykill.	Ankle broken by a piece of coal falling on it.
	22	John Le Snyder.	.....	American.	.....	Miner.	.....	40	M.	West Brookside.	.....	Schuykill.	Back injured by coal falling on him.
	23	Andrew Ramah.	.....	Hungarian.	.....	Driver.	.....	33	M.	Morea.	.....	Schuykill.	Hand and wrist fell in front of cars.
	23	Leonato Angelo.	.....	Italian.	.....	Laborer.	.....	31	S.	Pine Hill.	.....	Schuykill.	Hand severely injured by coal from a shot.
	28	John Kostick.	.....	Pole.	.....	Driver.	.....	22	S.	Morea.	.....	Schuykill.	Severely injured by being caught between wagons and side of tunnel.
	4	George Omrta.	.....	Creek.	.....	Miner.	.....	20	M.	Oak Hill.	.....	Schuykill.	Back and arms injured by premature blast.
	8	John Stedell.	.....	Austrian.	.....	Miner.	.....	30	M.	Silver Creek.	.....	Schuykill.	Hip fractured; fell under ear.
	12	Ignis Kazur.	.....	Pole.	.....	Miner.	.....	28	M.	Morea.	.....	Schuykill.	Hand mangled while trying to remove a block from under a car wheel.
July	12	Joseph Chave.	.....	American.	.....	Door boy.	.....	15	S.	Phoenix Park No. 3.	.....	Schuykill.	One leg cut off and the other broken by a fall of coal.
	13	Henry Knauber.	.....	American.	.....	Miner.	.....	21	S.	Otto.	.....	Schuykill.	One leg cut off by a fall of slate.
	20	John Yerker.	.....	American.	.....	Coal pusher.	.....	17	S.	Lincoln.	.....	Schuykill.	Foot severely injured by a fall of slate.
	22	Anthony Rantka.	.....	Pole.	.....	Driver.	.....	22	S.	Kaska-William.	.....	Schuykill.	Leg broken; fell under a mine car.
	25	Thomas McDonald.	.....	American.	.....	Carpenter.	.....	45	M.	Chandawer.	.....	Schuykill.	Eye and face burned by caustic soda, which he overturned.
	27	Oliver Mac hamer.	.....	American.	.....	Pine boss.	.....	37	M.	West Brookside.	.....	Schuykill.	Foot broken by a prop falling on it.
	27	Henry Schoek.	.....	American.	.....	Miner.	.....	35	M.	Lincoln.	.....	Schuykill.	Leg broken by a piece of coal falling on it.
	29	Tony Simmons.	.....	Italian.	.....	Laborer.	.....	36	M.	West Brookside.	.....	Schuykill.	Foot cut off by fall of rock.
	9	Adam Tingenavage.	.....	Pole.	.....	Laborer.	.....	35	M.	Lytle.	.....	Schuykill.	Turned by an explosion of gas at face of gangway, while firing a shot.
	9	George Patrike.	.....	Pole.	.....	Laborer.	.....	35	S.	Lytle.	.....	Schuykill.	
	11	Peter Muscopsky.	.....	American.	.....	Laborer.	.....	35	S.	Lytle.	.....	Schuykill.	
	11	Patrick Curran.	.....	American.	.....	Miner.	.....	40	M.	Chandawer.	.....	Schuykill.	Leg broken by a fall of coal.
	12	John Thompson.	.....	American.	.....	Miner.	.....	31	M.	Lincoln.	.....	Schuykill.	Three ribs broken by coal from a shot.
	13	John Thompson.	.....	American.	.....	Miner.	.....	29	M.	Lincoln.	.....	Schuykill.	One finger blown off by coal from a shot.



TABLE V—Continued.

Date of incident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
16	Charles Lokenbill, .....	American, .....	Miner, .....	25	S.	Pine Hill, .....	Schuylkill,	Back and hips injured by a fall of coal.
16	Charles Lorr, .....	American, .....	Loader, .....	21	M.	Phoenix Park No. 3, .....	Schuylkill,	Leg fractured by a car leaving track.
22	Joseph Jones, .....	English, .....	Miner, .....	37	M.	Morea, .....	Schuylkill,	Head and leg injured by a fall of coal.
22	Michael Moore, .....	Irish, .....	Miner, .....	29	M.	Pine Hill, .....	Schuylkill,	Hip dislocated by a fall of coal.
22	Jacob Clouser, .....	American, .....	Miner, .....	16	M.	Good Spring, .....	Schuylkill,	Injured by falling down a mainway.
26	Philip Fasinko, .....	Pole, .....	Miner, .....	26	M.	St. Clair, .....	Schuylkill,	Injured by being caught by a mine car which jumped by a piece of coal.
Aug.	John Eckardt, .....	German, .....	Loader, .....	29	S.	Colliery No. 10, .....	Schuylkill,	Leg broken by a piece of coal falling from chute.
16	John Dodgek, .....	Pole, .....	Loader, .....	21	S.	Silver Creek, .....	Schuylkill,	Leg broken while trying to uncouple wagons.
19	George Jenkins, .....	American, .....	Driver, .....	19	S.	Lytle, .....	Schuylkill,	Hipped and body lamed by a car.
30	Richard Thomas, .....	Polish, .....	Miner, .....	44	M.	Silverton, .....	Schuylkill,	Turned by an explosion of gas.
29	John Bowen, .....	Welsh, .....	Miner, .....	46	M.	Silverton, .....	Schuylkill,	Burned by an explosion of gas.
9	Peter Essacavaga, .....	Pole, .....	Miner, .....	25	S.	Silver Creek, .....	Schuylkill,	Arm, hands and face injured by coal from a blast.
13	Frank Urban, .....	Pole, .....	Miner, .....	36	S.	St. Clair, .....	Schuylkill,	Back injured by a fall of slate.
17	John Bogan, .....	Irish, .....	Slate picker, .....	13	S.	Richardson, .....	Schuylkill,	Skull fractured; he fell while starting coal.
22	James Tobin, .....	American, .....	Slate picker, .....	16	S.	Glenower, .....	Schuylkill,	Arm broken by a rope wheel in breaker.
25	Peter Smith, .....	German, .....	Laborer, .....	26	M.	West Brookside, .....	Schuylkill,	Leg broken while spragging a wagon; he fell under the wheels.
Oct.	1 John Boyle, .....	Irish, .....	Laborer, .....	48	S.	Silver Creek, .....	Schuylkill,	Arm broken while unloading timber from mine car.
3	Bromus Burkot, .....	Pole, .....	Driver, .....	21	S.	Silver Creek, .....	Schuylkill,	Arm broken; caught between wagon and loose frame.
4	Joseph Gustitus, .....	Pole, .....	Miner, .....	37	S.	Kaska-William, .....	Schuylkill,	Leg broken; a lump of coal fell off wagon.
6	Thomas Morgan, .....	American, .....	Driver, .....	25	S.	Wadesville, .....	Schuylkill,	Arm broken; caught between car and brattice.
6	William Brown, .....	American, .....	Driver, .....	17	S.	Wadesville, .....	Schuylkill,	Foot injured while getting off car.
7	John Carpwitch, .....	Lithuanian, .....	Miner, .....	39	M.	Silverton, .....	Schuylkill,	Leg broken by coal falling from upper side of heading.
7	John Popoka, .....	Lithuanian, .....	Miner, .....	39	S.	Silverton, .....	Schuylkill,	Body injured by coal falling from upper side of heading.
12	John Thomas, .....	Welsh, .....	Driver, .....	26	S.	Silver Creek, .....	Schuylkill,	Leg broken while unhitching mule.

17	Tresco Goyda, .....	Hungarian, .....	Laborer, .....	24	S.	Morea, .....	Schuylkill, .....	Arm broken by coal from a blast.
19	George Garbel, .....	Hungarian, .....	Loco, helper, .....	17	S.	St. Clair, .....	Schuylkill, .....	Ankle broken; was sliding his foot along rail in front of engine.
23	Lawrence Ryan, .....	American, .....	Driver, .....	18	S.	Lytle, .....	Schuylkill, .....	Hips and legs injured; caught between car and door frame.
Nov.								
5	Andrew Antolowsky, .....	Pole, .....	Laborer, .....	25	M.	Morea, .....	Schuylkill, .....	Head injured by a fall of coal.
12	Edward Williams, .....	Polish, .....	Miner, .....	16	M.	Williams, .....	Schuylkill, .....	Leg injured by fall of coal.
14	Thomas Smith, .....	German, .....	Loader, .....	26	M.	Colliery No. 10, .....	Schuylkill, .....	Hands and face burned by an explosion of gas.
14	Patrick Boner, .....	Irish, .....	Loader, .....	20	S.	Colliery No. 10, .....	Schuylkill, .....	Hands and face burned by an explosion of gas.
14	James McNellis, Jr., .....	Irish, .....	Door boy, .....	15	S.	Colliery No. 10, .....	Schuylkill, .....	Hands and face burned by an explosion of gas.
14	Samuel Punmoyer, .....	American, .....	Miner, .....	47	M.	West Brookside, .....	Schuylkill, .....	Severely injured by falling down slope.
18	Daniel Poffenberger, .....	American, .....	Laborer, .....	27	M.	West Brookside, .....	Schuylkill, .....	Hand injured while hitching a mule.
19	Thomas Igo, .....	American, .....	Miner, .....	48	W.	Silver Creek, .....	Schuylkill, .....	Hands and face burned by an explosion of gas.
23	Maurice Finley, .....	American, .....	Miner, .....	40	S.	Greenwood, .....	Schuylkill, .....	Wrist severely cut by coal falling on it.
23	Andrew Balsis, .....	Pole, .....	Miner, .....	39	S.	Wadsworth, .....	Schuylkill, .....	Hip injured by a piece of coal striking him.
26	Henry Bretz, .....	American, .....	Miner, .....	35	M.	Good Spring, .....	Schuylkill, .....	Back severely injured by a fall of slate.
29	John Betz, .....	American, .....	For man on stripping, .....	45	M.	Mt. Hope, .....	Schuylkill, .....	Three ribs dislocated; he slipped on a railroad car.
Dec.								
10	Michael Perridge, .....	Slay, .....	Miner, .....	37	S.	East Ridge, .....	Schuylkill, .....	Legs injured by a fall of coal.
14	George Utislin, .....	Italian, .....	Laborer, .....	32	M.	St. Clair, .....	Schuylkill, .....	Leg broken while unloading timber from a railroad car.
19	Lewis Smith, .....	Russian, .....	Miner, .....	29	M.	Wadsworth, .....	Schuylkill, .....	Leg broken by fall of coal.
27	William Prosser, .....	American, .....	Laborer, .....	25	M.	Pine Hill, .....	Schuylkill, .....	Leg broken; he was hitching a mule to a car.
30	John Shilcavage, .....	Lithuanian, .....	Miner, .....	27	S.	Lytle, .....	Schuylkill, .....	Two ribs broken and back injured by a fall of slate.
31	Faso Sowshak, .....	Pole, .....	Laborer, .....	25	S.	Morea, .....	Schuylkill, .....	Leg broken by a fall of coal.



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# BITUMINOUS MINE DISTRICTS.

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# FIRST BITUMINOUS DISTRICT.

ALLEGHENY, FAYETTE, WASHINGTON AND WESTMORELAND  
COUNTIES.

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Monongahela, Pa., March 31, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In accordance with an act, entitled "An act relating to bituminous coal mines and providing for the lives, health, safety and welfare of persons employed therein," I hereby present my annual report as Inspector of Mines for the First Bituminous Coal District.

Eight new mines have been opened; one re-opened and one abandoned during the year.

Each mine in the district has received attention in the descriptive portion of this report.

Aside from Table No. 4 a statement of each fatal accident is given under the head of "Fatal Accidents."

In addition to the usual ones, tables in regard to ventilation, the use of mining machines, etc., are inserted.

On examination of Table 4 and 5 it will be found that 183 accidents occurred in the district during the year, of which forty-one proved fatal, being an excess of four over the number for the year 1900. There were 142 non-fatal ones in 1901.

Total production of coal for 1900, was 8,654,376 tons.

Total production of coal for 1901, as reported to this office was 8,108,658 tons, being a decrease in production of 545,718 tons in 1901, from that of 1900.

The number of wives left widows was twenty-seven, and of orphans fifty-six.

In the report of 1900, it was stated that in the case of the Commonwealth against William Watkins, mine foreman of the Tremont mine, a verdict of guilty was rendered and the costs placed upon the county. This was an error, the defendant having paid the costs in the matter.

In noting the condition of the several mines in the district, the intent and purpose of the act is made the criterion in the making up of the report.

All of which is respectfully submitted.

HENRY LOUTTIT,  
Inspector of Mines.

## Examination of Candidates for Mine Foreman.

The annual examination was held in council chambers, at Monongahela, January 2, 3 and 4. The board of examiners was D. B. Blackburn; operator; J. P. N. Coulter, miner and Henry Louttit, Mine Inspector. Thirty-six applicants appeared before the board, of which nine were successful, viz:

First Grade: John Black, James Stevenson, William Pursglove, E. L. Morris, George Stark, William Blower, Enoch Blower and John Dunlap. Second Grade: John L. Rea.

## Mining Statistics.

Number of mines in the district, .....	86
Number of mines in operation during 1901, .....	64
Number of tons of coal produced, .....	8,108,658
Number of tons shipped, .....	7,975,495
Number used for steam at mines, .....	101,250
Number sold to employes and others, .....	31,913
Number of persons employed inside the mines, .....	8,993
Number of persons employed outside the mines, ....	1,202
Number of fatal accidents, .....	41
Number of tons of coal produced per fatal accident, ..	109,967
Number of persons employed per fatal accident, .....	249
Number of non-fatal accidents, .....	142
Number of tons of coal produced per non-fatal accident, .....	57,104
Number of persons employed per non-fatal accident, ..	72
Number of wives made widows by accidents, .....	27
Number of orphans by accidents, .....	56
Number of kegs of powder used, .....	43,884
Number of pounds of dynamite used, .....	29,240
Number of days worked, .....	12,018
Number of cylindrical boilers, .....	22
Number of tubular boilers, .....	151
Number of steam locomotives, .....	2
Number of electric locomotives, .....	22
Number of new mines opened, .....	8

TABLE A—Production of Coal, Number of Persons Employed by Each Company During the Year 1901, and the Average Number of Tons Produced per Employee.

Name of Company.	Number of tons produced.	Number of persons employed.
Monongahela River Consolidated Coal and Coke Co., .....	3,334,058	4,595
Pittsburg Coal Company, .....	1,772,029	1,975
Vesta Coal Company, .....	1,282,791	1,103
Charleoi Coal Works, .....	210,103	213
Stockdale Coal Company, .....	209,114	118
Ella Coal Company, ..	187,633	233
Shoenberger Gas Coal Company, .....	184,455	218
James W. Ellsworth & Company, .....	129,866	324
Bunola Mining Company, .....	119,080	121
John H. Jones, .....	98,503	163
C. Jutte & Company, .....	96,082	158
Hazel Kirk Gas Coal Company, .....	75,302	167
Clyde Coal Company, .....	66,418	71
Henderson Coal Company, .....	65,240	61
Marine Coal Company, .....	63,920	175
People's Coal Company, .....	52,540	134
Morris Bailey Coal Company, .....	47,901	91
A. R. Budd, .....	47,250	119
Star Coal Company, .....	41,869	115
B. Braznell & Son, .....	25,109	38
Total, .....	8,108,658	10,195

Number of tons produced per employee, 795.4.

TABLE B—Number of Fatal Accidents and Tons of Coal Produced per Life Lost.

Name of Company.	Number of fatal accidents.	Number of tons produced per life lost.
Monongahela River Consolidated Coal and Coke Company, .....	20	160,773
Pittsburg Coal Company, .....	6	295,338
Vesta Coal Company, .....	1	641,395
Charleoi Coal Works, .....	3	105,051
Stockdale Coal Company, .....	3	69,794
Ella Coal Company, .....	1	187,033
Shoenberger Gas Coal Company, .....	1	184,455
James W. Ellsworth & Company, ..	2	64,934
Bunola Mining Company, .....	1	119,080
John H. Jones, .....	1	98,503
C. Jutte & Company, .....	2	96,082
Hazel Kirk Gas Coal Company, .....	2	37,651
Clyde Coal Company, .....	1	66,418
Henderson Coal Company, .....	1	65,240
Marine Coal Company, .....	1	63,920
People's Coal Company, .....	1	52,540
Morris Bailey Coal Company, .....	1	47,901
A. R. Budd, .....	1	47,250
Star Coal Company, .....	1	41,869
B. Braznell & Son, .....	1	25,109
Total and average, .....	11	.....

TABLE C—Showing the Number of Fatal and Non-Fatal Accidents and the Number of Tons of Coal Produced per Accident.

Name of Company.	Number of accidents.	Number of tons of coal produced per accident.
Monongahela River Consolidated Coal and Coke Company, .....	87	38,222
Pittsburg Coal Company, .....	42	42,191
Vesta Coal Company, .....	1	183,256
Charleroi Coal Works, .....	2	106,051
Stockdale Coal Company, .....	6	34,852
Ella Coal Company, .....	9	20,781
Shoenberger Gas Coal Company, .....	2	36,891
James W. Ellsworth & Company, .....	3	43,289
Bunola Mining Company, .....	1	119,080
John H. Jones, .....	2	49,251
C. Jutte & Company, .....	1	96,082
Hazel Kirk Gas Coal Company, .....	6	12,550
Clyde Coal Company, .....	1	66,418
Henderson Coal Company, .....	1	65,240
Marine Coal Company, .....	3	12,784
People's Coal Company, .....	3	26,270
Morris Bailey Coal Company, .....	1	47,901
A. It. Budd, .....	1	47,250
Star Coal Company, .....	2	20,934
B. Braznell & Son, .....	1	25,109
W. H. Flint & Company, .....	1	.....
Total and average, .....	183	.....

TABLE D—Classification of Accidents.

Classification of Accidents.	Killed or fatally injured.	Injured.	Total.
Caught between car and pillar, .....	1	4	5
By falls of coal, .....	12	13	25
By falls of slate, .....	25	48	73
By falls of coal and slate, .....	5	6	11
By falls of roof coal, .....	3	3	6
By falls of horse-back, .....	1	1	2
Struck by an ascending cage, .....	2	.....	2
By cages, .....	1	25	26
By mining machines, .....	1	5	6
By flying coal from a shot, .....	1	3	4
By falls of rock, .....	1	1	2
By being struck by posts, .....	1	2	3
Caught between car and post, .....	1	2	3
By being kicked by mules, .....	1	2	3
By being caught between cap and rib, .....	1	3	4
Burned by powder through a missed shot, .....	1	1	2
Struck by a descending cage, .....	1	1	2
Caught between motor and entry pillar, .....	1	2	3
Burned by powder, .....	1	1	2
By an explosion of fire damp, .....	1	1	2
By a fall of upper slate, .....	1	1	2
Struck by sliding slate, .....	1	1	2
Struck by empty dilly trip, .....	1	1	2
By premature blast, .....	1	1	2
By runaway car, .....	1	1	2
By a fall of shale, .....	1	1	2
By a fall of sandstone, .....	1	1	2
Miscellaneous, .....	16	16	32
Total, .....	41	142	183

Table E—Occupations of Persons Killed and Injured.

Occupation.	Killed or fatally injured.	Injured.	Total.
Miners, .....	35	68	103
Trappers, .....	1	1	1
Brakeman, .....	1	1	1
Blacksmith, .....	1	1	1
Cager, .....	1	1	1
Drivers, .....	2	23	25
Loaders, .....	1	20	21
Engineer, .....	1	1	1
Cutter, .....	1	1	1
Pick boy, .....	1	1	1
Machine men, .....	2	2	2
Stone Mason, .....	1	1	1
Mine foreman, .....	1	1	1
Timbermen, .....	2	2	2
Roadsmen, .....	3	3	3
Wiremen, .....	3	3	3
Carpenter, .....	1	1	1
Pumpman, .....	1	1	1
Day hand, .....	1	1	1
Machine helpers, .....	1	1	2
Boss driver, .....	1	1	1
Checkweighman, .....	1	1	1
Motorman, .....	1	1	1
Driver and miner, .....	1	1	1
Tripper, .....	1	1	1
Gripper, .....	1	1	1
Trip catcher, .....	1	1	1
Switchman, .....	1	1	1
Machine runners, .....	2	2	2
Total, .....	41	142	183

TABLE F—Nationalities of Persons Killed or Injured.

Nationality.	Killed.	Injured.	Total.
Americans, .....	5	54	62
English, .....	4	11	15
Welsh, .....	2	2	2
Scotch, .....	5	5	5
Irish, .....	1	5	6
German, .....	2	4	6
Poles, .....	6	8	14
Slavs, .....	8	18	27
Austrians, .....	3	2	6
Hungarians, .....	4	8	12
Italians, .....	1	22	23
French, .....	2	1	2
Belgians, .....	1	1	1
Bohemians, .....	1	1	1
Finlanders, .....	3	2	5
Canadian, .....	1	1	1
Total, .....	41	142	183



## Production of Coal in Tons by Each Operator During the Year 1901.

Monongahela River Consolidated Coal and Coke Company, .....	3,334,053
Pittsburgh Coal Company, .....	1,772,029
Vesta Coal Company, .....	1,282,791
Charleroi Coal Works, .....	210,103
Stockdale Coal Company, .....	209,114
Ella Coal Company, .....	187,033
Shoenberger Gas Coal Company, .....	184,455
James W. Ellsworth & Co., .....	129,866
Bunola Mining Company, .....	119,080
John H. Jones, .....	98,503
C. Jutte & Co., .....	96,082
Hazel Kirk Gas Coal Company, .....	75,302
Clyde Coal Company, .....	66,418
Henderson Coal Company, .....	65,240
Marine Coal Company, .....	63,920
People's Coal Company, .....	52,540
Morris Bailey Coal Company, .....	47,901
A. R. Budd, .....	47,250
Star Coal Company, .....	41,869
B. Braznell & Son, .....	25,109
Total, .....	8,108,658

Table Giving Name of Mine Type and Number of Mining Machines in use and Motive Power for Their Operation.

Name of Mine.	Type of machine.	Number of each type.	Motive power used.
Arnold No. 1.	Jeffry.	6	Electricity.
Arnold No. 2.	Jeffry.	3	Electricity.
Banner.	Link belt.	4	Electricity.
Cleveland.	Jeffry.	7	Electricity.
Courtney.	Jeffry.	2	Electricity.
Equitable.	Jeffry.	4	Electricity.
Eclipse.	Morgan-Gardner.	5	Electricity.
Little Squaw.	Jeffry.	3	Electricity.
Manown.	Jeffry.	6	Compressed air.
Manown.	Sullivan.	4	Compressed air.
North Webster.	Jeffry.	5	Electricity.
Nottingham.	Morgan-Gardner.	5	Electricity.
Somers No. 2.	Morgan-Gardner.	7	Electricity.
Somers No. 3.	Morgan-Gardner.	1	Electricity.
Somers No. 5.	Morgan-Gardner.	1	Electricity.
Black Diamond.	Jeffry.	4	Electricity.
Beaumont.	Jeffry.	2	Electricity.
Camden.	Morgan-Gardner.	3	Electricity.
Coal Bluff.	Morgan-Gardner.	1	Electricity.
Coal Bluff.	Jeffry.	1	Electricity.
Cincinnati.	Morgan-Gardner.	7	Electricity.
Catsburg.	Jeffry.	8	Electricity.
Crescent.	Jeffry.	4	Electricity.
Eclipse.	Morgan-Gardner.	8	Electricity.
Fayette City.	Harrison.	8	Compressed air.
Gallatin.	Jeffry.	6	Electricity.
Irill.	Jeffry.	4	Electricity.
Knob.	Jeffry.	6	Electricity.
Little Redstone.	Morgan-Gardner.	5	Electricity.
Mongah.	Morgan-Gardner.	4	Compressed air.
Mongah.	Jeffry.	3	Electricity.
Mongah.	Brown.	1	Electricity.
Milesville.	Morgan-Gardner.	6	Electricity.
Risher.	Morgan-Gardner.	6	Electricity.
Rostraver.	Jeffry.	3	Electricity.
Tremont.	Jeffry.	6	Compressed air.
Vigilant.	Jeffry.	4	Electricity.
Vigilant.	Brown.	1	Electricity.
Ellsworth No. 1.	Jeffry.	6	Compressed air.
Ellsworth No. 1.	Sullivan.	4	Compressed air.
Ellsworth No. 1.	Ingersoll.	6	Compressed air.
Ellsworth No. 2.	Jeffry.	3	Compressed air.
Ellsworth No. 2.	Sullivan.	1	Compressed air.
Ellsworth No. 2.	Ingersoll.	2	Compressed air.
Ellsworth No. 3.	Jeffry.	3	Compressed air.
Ellsworth No. 3.	Ingersoll.	2	Compressed air.
Ellsworth No. 4.	Jeffry.	2	Compressed air.
Ellsworth No. 4.	Ingersoll.	1	Compressed air.
Vesta No. 1.	Jeffry.	1	Compressed air.
Vesta No. 1.	Sullivan.	2	Compressed air.
Vesta No. 1.	Ingersoll.	5	Compressed air.
Vesta No. 1.	Harrison.	16	Compressed air.
Vesta No. 1.	Ingersoll.	8	Compressed air.
Vesta No. 2.	Ingersoll.	8	Compressed air.
Bertha.	Jeffry.	2	Compressed air.
Bertha.	Link belt.	4	Electricity.
Bertha.	(Sullivan.	3	Compressed air.
Blanche.	Ingersoll.	2	Compressed air.
Blanche.	H. S. & I.	1	Compressed air.
Blanche.	Jeffry.	5	Electricity.
Bunola.	Morgan-Gardner.	7	Electricity.
Rudd.	Jeffry.	3	Electricity.
Charlevoix.	Jeffry.	3	Electricity.
Clyde.	Morgan-Gardner.	5	Electricity.
Clinton.	Morgan-Gardner.	4	Electricity.
Ella.	Jeffry.	1	Electricity.
Ella.	(Goodman.	2	Electricity.
Hazel Kirk.	Morgan-Gardner.	3	Electricity.
Irons.	Morgan-Gardner.	2	Electricity.
Marine.	Jeffry.	3	Electricity.
Star.	Morgan-Gardner.	3	Electricity.
Shoenberger.	Morgan-Gardner.	3	Electricity.
Iron City.	Morgan-Gardner.	3	Electricity.

Approximate quantity of coal mined by pick, ..... 2,623,083 tons.  
 Approximate quantity by machines, ..... 5,485,575 tons.

Total number of machines in use 292, viz: Jeffry, 118; Morgan-Gardner, 97; Ingersoll, 26; Harrison, 24; Sullivan, 14; Link belt, 8; Brown, 2; Goodman, 2; H. S. & I., 1.

TABLE G—Giving name of mine, kind of opening, method of ventilation, size of ventilator, etc., in the First Bituminous District.

Name of Mine.	Kind of Opening.	Method of Ventilation.	Size.	Cubic feet of air at inlet.	Cubic feet of air at outlet.	Number of splits.	Persons in a continuous air current.	
							Persons in a continuous air current.	Persons in a mixed air current.
Allequippa,	Drift,	Furnace,	28 ft. x 9 ft. x 5 ft.					
Abe Hays,	Drift,	Furnace,	18 ft.					
Apollo,	Drift,	Fan,	20 ft.	60,000	31,900		49	
Black Diamond,	Drift,	Fan,	14 ft.	36,000	25,200	3		
Beaumont,	Slope,	Fan,	28½ ft. x 7 ft. x 4½-3 ft.					
Camden,	Drift,	Furnace,	9 ft. 4 in.	44,276	64,800	2		
Coal Bluff,	Drift,	Fan,	16 ft.	48,000	52,000	4		
Cincinnati,	Drift,	Fan,	16 ft.	29,350	33,430	2		
Catsburg,	Drift,	Furnace,	12 ft.					
Champion,	Drift,	Fan,	18 ft.	30,000	40,000	2		
Chippier,	Slope,	Fan,	18 ft.	42,000	66,900	6		
Crescent,	Drift,	Fan,	18 ft.	44,100	47,500	3		
Edgely,	Drift,	Furnace,	20 ft.	35,700	40,000	2		
Fayette City,	Drift,	Furnace,	32 ft. x 6½ ft. x 8 ft.	21,610	18,040		91	
Gallatin,	Drift,	Furnace,	25 ft.	35,000	41,750		149	
Hilldale,	Drift,	Fan,	19 ft.					
Ivill,	Drift,	Fan,	20 ft.	39,000	40,000	3		
Knob,	Slope,	Fan,	20 ft.	52,500	42,000	2		
Little Redstone,	Drift,	Furnace,	20 ft.					
Mongah,	Drift,	Fan,	30 ft. x 8 ft. x 5 ft.					
Milesville,	Drift,	Furnace,	28 ft. x 7 ft. x 3 ft. x 4 ft.	13,890	54,800	3		
New Eagle,	Drift,	Furnace,	6 ft. x 4 ft. x 4 ft.	25,890	33,200	2		
Old Eagle,	Drift,	Furnace,	18 ft.	25,350	63,000	2		
Pine Run,	Drift,	Fan,	25 ft.	51,200	94,000	65		
Risher,	Drift,	Furnace,	36 ft. x 10 ft. x 10 ft.					
Rostraver,	Slope,	Fan,	25 ft.					
Tremont,	Drift,	Furnace,	25 ft.					
Vigilant,	Drift,	Fan,	25 ft.					
Walton, Lower,	Slope,	Furnace,	36 ft. x 10 ft. x 10 ft.					
Walton, Upper,	Drift,	Fan,	25 ft.	60,000	80,000	3		
Arnold No. 1,	Drift,							

Arnold No. 2.	Shaft.	Fan.	6 ft. x 7 ft. x 18 ft.	52,460	70,000	4
Anderson, .....	Drift.	Fan, .....	18 ft.	.....	.....	.....
Banner, .....	Drift.	Furnace, .....	18 ft.	17,040	34,460	3
Buffalo, .....	Drift.	Fan, .....	18 ft.	50,940	63,000	4
Courtesy, .....	Slope.	Furnace, .....	22 ft. x 6½ ft. x 3 ft.	29,560	24,000	47
Cliff, .....	Drift.	Fan, .....	18 ft.	35,000	42,000	2
Benitabie, .....	Drift.	Fan, .....	6 ft.	39,800	70,000	4
Eclipse, Railroad, .....	Drift.	Furnace, .....	6 ft.	20,640	15,480	32
Fidelity, .....	Drift.	Fan, .....	12 ft.	15,200	36,000	2
Germania, .....	Drift.	Furnace, .....	.....	.....	.....	.....
Gastonville No. 1, .....	Drift.	Furnace, .....	.....	.....	.....	.....
Gastonville No. 2, .....	Drift.	Furnace, .....	.....	.....	.....	.....
Hackett, .....	Drift.	Fan, .....	18 ft.	53,390	56,000	2
Little Squaw, .....	Drift.	Fan, .....	20 ft.	28,500	28,000	2
Manown, .....	Drift.	Furnace, .....	18 ft. x 8 ft. x 5 ft.	48,000	40,000	3
North Webster, .....	Drift.	Fan, .....	18 ft.	55,000	67,000	5
Nottingham, .....	Drift.	Fan, .....	18 ft.	59,000	53,000	5
Somers No. 2, .....	Slope.	Furnace, .....	18 ft. x 5 ft. x 3 ft.	10,800	20,640	68
Somers No. 3, .....	Drift.	Fan, .....	6 ft.	25,680	29,500	2
Somers No. 5, .....	Drift.	Furnace, .....	25 ft. x 7 ft. x 7 ft.	50,000	56,000	89
Acme, .....	Drift.	Fan, .....	20 ft.	40,000	48,000	30
Bunola, .....	Drift.	Fan, .....	20 ft.	24,200	35,000	72
Budd, .....	Drift.	Fan, .....	12 ft.	6,800	8,000	48
Bertha, .....	Drift.	Fan, .....	16 ft.	92,500	30,000	2
Blanche, .....	Drift.	Fan, .....	20 ft.	23,800	38,000	96
Coal Centre, .....	Drift.	Fan, .....	20 ft.	68,800	84,000	2
Clinton, .....	Drift.	Fan, .....	18 ft.	8,550	9,000	59
Charleol No. 1, .....	Drift.	Fan, .....	20 ft.	52,000	70,000	3
Clyde, .....	Drift.	Fan, .....	13 ft. 6 in.	62,400	67,200	3
Ellis No. 1, .....	Shaft.	Fan, .....	13 ft. 6 in.	84,000	65,000	3
Ellis No. 2, .....	Shaft.	Fan, .....	15 ft.	84,000	67,200	2
Ellis No. 3, .....	Shaft.	Fan, .....	15 ft.	52,200	42,000	3
Ellis No. 4, .....	Shaft.	Furnace, .....	24 ft. x 7 ft. x 5 ft.	27,520	23,200	28
Hazel Kirk, .....	Drift.	Furnace, .....	31 ft. x 7 ft. x 5 ft.	7,140	12,000	5
Irons, .....	Drift.	Fan, .....	20 ft.	28,000	30,000	92
Marine, .....	Drift.	Furnace, .....	18 ft. x 5 ft. x 4 ft.	4,350	20,000	71
Peters Creek, .....	Drift.	Fan, .....	18 ft.	66,000	50,000	3
Shoenberger, .....	Drift.	Fan, .....	16 ft.	58,000	54,000	3
Star, .....	Drift.	Fan, .....	25 ft.	58,200	73,600	3
Vesta No. 1, .....	Drift.	Fan, .....	12 ft. 4 in.	70,600	67,000	3
Vesta No. 2, .....	Drift.	Fan, .....	.....	29,400	37,000	2
Vesta No. 3, .....	Drift.	Fan, .....	.....	.....	.....	70

\*Mixed.





Arnold No. 2.	Shaft.	5.20	15.60	11.40	11.90	13	14	21	29	680
Anderson, Fan.	Fan.									227
Banner, Furnace.	Furnace.	7.10		12.10		35	20	10		3-3
Bell, Fan.	Fan.									628
Buffalo, Fan.	Fan.	2.80	8.80	17.10	15.60	8	25	40	59	4,950-5,280-6,060
Chevaland, Fan.	Furnace.									323
Courtney, Fan.	Furnace.									645
Deebley, Fan.	Fan.	17.820	13.5 0			15	74			185
Douglas, Fan.	Fan.	11.710	11.340	7.850	23.220	32	22	55	15	2,600-1,980
Edwards, Fan.	Furnace.									
Fidelity, Fan.	Fan.	13.200	14.849			55	27			
Germania, Fan.	Furnace.									
Gastonville No. 1, Drift.	Furnace.									
Gastonville No. 2, Drift.	Furnace.									
Hackett, Fan.	Fan.	18.488	16.300			10	51			532
Little Squaw, Fan.	Fan.	3.580	12.360			26	20			383
Manaw, Fan.	Furnace.	12.426	8.160	6.300		21	35	13		185
North Webster, Fan.	Fan.	6.000	4.800	7.390	5.390	8	6	16		982
Nottingham, Fan.	Fan.	25.200	5, 250	4, 800	16, 200	11, 500	45	30	25 20	491
Pratt, Somers No. 1, Stone.	Furnace.									158
Somers No. 2, Drift.	Fan.									2,300-9,660-13,500-9,010
Somers No. 3, Drift.	Furnace.									342
Somers No. 4, Drift.	Furnace.	11.200	10.200			47	28			561
Acme, Fan.	Fan.									1,333
Bald, Fan.	Fan.									301
Bertha, Fan.	Fan.									304
Blanche, Fan.	Fan.	9.520	3,000			64	10			414
Coal Centre, Fan.	Fan.	7.500	17.200	11.500						563
Clinton, Fan.	Fan.	7.650	14.40			39	76			144
Charleroi No. 1, Drift.	Fan.									520
Clyde, Fan.	Fan.									636
Ella, Fan.	Fan.	12.000	9, 000	9, 000		16	20	15		1,714
Ellsworth No. 1, Fan.	Fan.	27.000	23, 250	23, 500		15	40	40		815
Ellsworth No. 2, Fan.	Fan.	13, 000	13, 000	36, 000		33	18	18		636
Ellsworth No. 3, Fan.	Fan.	16, 800	21, 500			43	60			636
Ellsworth No. 4, Fan.	Fan.									1,714
Hazel Kirk, Fan.	Fan.	20.400	4,000	8,550		60	17	5		636
Iron City, Fan.	Furnace.									982
Iron City, Fan.	Furnace.									1,428
McIntosh, Fan.	Furnace.									1,150
Peters Creek, Fan.	Furnace.	7.650	8,700	12,500		57	72	6		3,600
Shoenberger, Fan.	Fan.	17,000	19,200	16,200		61	27	7		400
Star, Fan.	Fan.	20,000	5,400	6,000		71	84	54		278
Vesta No. 1, Fan.	Fan.	18,800	10,640	12,000		63	88	10		578
Vesta No. 2, Fan.	Fan.	14,750	3,000			68	70	70		141
Vesta No. 3, Fan.	Fan.	8,060	11,700	11,400	Mixed					

## Descriptions of Fatal Accidents.

On February 8, Michael Tomship, a miner, was killed instantly in Catsburg mine by a fall of slate. The slate had been sounded a short time previous to its falling and at that time was considered safe.

Joseph Laveskie, a miner, while at work, March 16, in Cincinnati mine was instantly killed by a fall of slate. The deceased had fired a tight shot which failed to throw the coal, he then commenced to shear it, while at this work some coal fell, together with slate, the latter striking Laveskie, resulting as above.

On March 22, John Ozzella, a miner, was instantly killed in Galatin mine by a fall of slate. The deceased was, at the time of the accident, loading a car of coal. Subsequent examination of the place showed that the deceased had been working in a breakthrough, the slate fell out of the middle of the road, being "V" shaped. Ozzella had drilled a hole in it for the purpose of putting in a blast but before he could do so it fell.

Stunny Stesher, a miner, was killed instantly March 25, in Ellsworth No. 2, by being caught by an ascending cage; the deceased gave the signal to hoist, and on being answered he got on the cage, but a conversation between his partner, Leon Kowavis, and the former caused Stesher to make an attempt to get off the cage, but in doing so the cage caught him as stated.

John Kornopshe, a miner, employed at the Eclipse River mine was instantly killed by a fall of slate while loading a car of coal. This accident occurred April 12.

Elias Coulson, a miner, was fatally injured in an entry of Vesta No. 1 mine, April 16, by a fall of slate; the deceased and Francis Resolet worked together, they had a large amount of slate on and so as to get some of it down they put a shot in the centre of it, but it failed to do the work, so another hole was put in, but nearer the face of the entry, while tamping the latter, the part which had been previously shot fell, resulting as above.

On April 19, August Stilling, a miner, was fatally injured by a fall of slate in Charleroi mine while removing coal from under it. A short time previous to its falling the deceased made an attempt to get it down, by the use of a wedge.

Alexander Lees, a miner, was fatally injured in Walton Upper mine, April 25, by a fall of slate. The deceased worked in a rib, and while knocking out a post from under some slate it fell on him.

At Acme mine, April 26, John Powko, a miner, was instantly killed by a fall of upper slate. The deceased, Michael Minenock and Paul Moleskey worked together in an entry pillar. At the time of the accident Minenock was shearing at the face, Powko standing close by him for the purpose they, Minenock and Moleskey, say to give warning if anything should move, and while thus employed, a piece of

the upper slate gave way without any chance to these persons to notify each other. The place where this fatality occurred was near the crop line, the roof members were much disturbed and as a consequence required careful attention, but while these persons realized this to some extent they were somewhat negligent, as the posts that were used were entirely too far apart and carelessly adjusted. I am informed that a post was set under the slate that fell, but it was not set properly.

John Chillko, a miner, was killed instantly in Charleroi mine, May 8, by a fall of slate. It seems from the appearance of the room that the deceased was knocking coal at the time of the accident. The slate fell out near road head, it was cut off on the left by a slip, and ran out on the right leaving no support except that of resting on the face of the coal. I am informed that the deceased was somewhat careless and headstrong at his work, and had been repeatedly warned relative to the dangers incident to the mining of coal.

Andrew Kalman, a miner, while at work with his father, in Acme mine, May 9, was instantly killed by a fall of slate. The deceased was shoveling coal back at the time of the accident. The slate was cut off by slips on either side and at the face, they tried to get it down a short time previous to its falling.

At Coal Bluff mine, May 11, James Gallagher, a miner, was so seriously injured by being caught by a car that death resulted in about six hours afterwards. A driver, John Brown, was hauling a loaded car on an entry known as No. 10, and while near room 15, the deceased jumped on the front end of car; on reaching the entry parting he fell off and the car ran on him resulting as above stated.

Michael Halodrick, a miner, was killed instantly in Catsburg mine, May 13, by a fall of slate while knocking coal from under it. Some time previous to the slate falling the fire boss of the mine told the deceased and his partner, Andrew Rodjeskie, to make the slate secure when they moved some coal out of the way, but it seems that they did not do anything with it.

James Blakely, a miner, while at work in the Courtney mine, May 21, was instantly killed by a fall of slate while loading a car of coal. His partner, Albert Barton, informed me that the deceased sounded the slate a few minutes before it fell and pronounced it safe. On examination of the place I found that the slate fell out in the shape of a "pot."

Joseph Zuhas, a miner, while at work in his room at the Gallatin mine, May 27, was so severely injured by a piece of slate sliding down on him, after falling on some loose coal, that he died from the effect.

John Reposkie, a miner, was fatally injured, June 9, by being caught between car and entry pillar. The deceased was riding on the hitching of the first and second car of a trip and it is supposed



that his body reached too far past the side of the car, and as a consequence he was drawn in between the car and pillar as stated. This accident occurred in the Ivill mine.

Frank Fisher, a miner, was killed instantly in Cincinnati mine, June 12, by being run over by an empty dilly trip while on his way out of the mine.

In Milesville mine, Jeremiah Cavanaugh, a miner, was killed instantly by a fall of slate, June 21. The deceased was shoveling coal from under the slate when it fell on him. The fire boss of the mine marked the slate as dangerous; a miner who worked next room to the deceased called his attention to the unsafe condition of the slate, but he said he would take it down after he loaded a car.

George Jacobs, a miner, was instantly killed in Irons mine, June 24, by a premature blast. The deceased had fired a shot in the slate near the left side of entry and loaded one car out of it, subsequently he tried a shot on the right side, and as far as can be learned he thought that the squib had missed fire, but on reaching the face of entry the shot ignited throwing Jacobs against the entry pillar resulting as above.

On July 2, John Corey, a miner, was killed instantly in Mongah mine by a fall of slate while in the attempt to take it down.

Michael Holavas, a miner, was instantly killed in Acme mine, July 5, by a fall of horseback. The deceased and a brother were at work bringing back a skip, at the time of the accident the former was getting "tamping" to use in a hole which they intended to fire in a small butt. Running nearing parallel with a forty-five degree angle a horseback made its appearance next to corner of skip, on examination I found that the horseback was entirely cut off by slips, which, as a consequence, made it extremely dangerous.

Petro Bushelli, a miner, was fatally injured in the Tremont mine, July 16, by a fall of slate while bearing in.

John Christo, a day hand, employed at the Little Redstone mine was instantly killed, July 17, by a fall of rock. The deceased and a number of others were taking down roof on a double parting for the purpose of raising the tracks on same, while at this work a piece of rock in the shape of an inverted V crossed the double parting at an angle of about forty-five degrees, the lower part being about forty-five and one-half inches wide, the upper on an average about twelve inches, part of the rock had previously fallen, leaving some six feet, in length, up next to the entry pillar. Immediately preceding the accident, Andrew Sabo, one of the workmen told the deceased that "the rock was loose and for him to watch himself," the latter sounded the rock, and then, for some unknown reason, went under it.

William Paling, a miner, while at work in the Eclipse River mine, was killed instantly, August 1, by a fall of slate while loading a car,

the deceased had worked in a break through between two entries, some eleven feet of slate had been up of which two was on the entry, two posts had been set under the slate, one on the entry and the other in the breakthrough, the latter was dislodged by the falling slate, a slip appears in the slate near left pillar and running nearly parallel with the same, this slip caused the slate to fall and dislodge the post which was the immediate cause of the accident.

Louis Jones, a miner, was fatally injured in Catsburg mine, August 1, by a fall of slate. The deceased and his father worked together, and at the time of the accident they were loading a car of coal, the former to the left of the road head and the latter to the right, when the slate fell it nearly caught the father.

August Kentola, a miner, was fatally injured in Vesta No. 1, August 2. The deceased was, at the time of the accident, knocking coal off the side of a rib and under the edge of a large body of slate part of which fell on Kentola, resulting as above.

Metsey Knezie, a miner, was instantly killed at Eclipse Railroad mine, August 8, by a fall of slate. The deceased was squaring a room rib, he had one post under the slate between road side and rib, but the slate was nearly cut off by slips which made it extremely dangerous to work under; from appearance of the slate after the accident, it seems that it could be seen that it required more than ordinary attention.

On August 17, John Johnson, a miner, employed at the Tremont mine, was instantly killed by a fall of slate while loading a car.

John McMann, a driver, was fatally injured in Marine mine, August 19, by being kicked by a mule, the deceased was driving a "new mule" and while in a room, with one car attached, it stopped, and McMann used a whip on it, this was immediately followed by a kick, resulting as stated.

William Smith, checkweighman, at the Banner mine, was fatally injured, August 31, by being struck by a partition, made of boards, which had been previously struck by a runaway car which had got beyond the control of the checkman. On the morning of the accident I was standing in the checkhouse while the checkman was letting a car down the incline toward the tippie; on reaching a point midway between tippie and checkhouse some one on the latter called to stop the car; on trying to do this the checkman found that he could not, on account of the brake on the drum failing to work, the car dashed into the tippie doing but very little damage. I called the attention of the checkman to the dangers incident to not having the car under perfect control while on the incline, and that the matter must be adjusted; by this time the mine foreman made his appearance and I repeated the injunction to him; operations at the mine



was then suspended and work commenced on the drum brake, afterwards a car was checked down the incline without difficulty, but on trying another one it stopped owing to the brake not working properly; the mine foreman then used a small bar on the brake which relieved it sufficiently to allow the car to move on the incline but it rendered the checkman powerless to prevent the car from running away, the brake failing to respond to the pressure of the lever consequently the car came in contact with the partition above mentioned with terrible violence.

James Parker, a miner, was instantly killed by a fall of shale, September 1, in Arnold No. 1 mine. The deceased was working in a room taking off a "skip;" at the time of the accident he was under the roof shale for quite a distance without protection from the shale, except that of resting on the rib side. On examination of the place I found that the shale had broken off very abruptly parallel to the rib side and at right angles to the same.

Petro Brovoskie, a miner, was instantly killed, September 13, by being struck by an ascending cage and falling down shaft at the Hazel Kirk mine. The deceased had entered the mine by way of the stairway for the purpose of employment, to leave the mine he got on the cage with Henry Naylor, the mine foreman and John Cosack, a miner, when about thirty-five feet from bottom of shaft he was seen to move to and fro, when suddenly he pitched forward, and before either Naylor or Cosack could catch him he fell between cage and timbers of shaft, and from this point to the bottom of the shaft. From the action of Brovoskie while on the cage it is supposed that he was overcome by some natural trouble which caused him to reel in the manner stated.

Stanko Gondith, a miner, employed at the Hazel Kirk mine, October 1, was instantly killed by a fall of slate while, it is supposed, squaring up the entry pillar of the entry in which he worked.

Stephen Kerrecks, a miner, was fatally injured in Germania mine, October 11, by a fall of slate which on striking him caused another piece to penetrate his leg in such a manner as to cause death in two hours after being injured.

William Booth, a miner, employed at the Equitable mine was fatally injured, October 23, by a fall of slate. The deceased was knocking coal at the time the slate fell. Subsequent examination of the place showed that the slate had been up near roadhead, a slip ran nearly at right angles to the face of room, another was visible, wedged shaped, and running parallel to the face, a post was under the slate yet standing, but it had afforded no protection to the slate that fell afterwards.

George Anchok, a miner, was fatally injured by a fall of slate while loading a car. Anchok and a cousin worked together in a rib, the

latter informed me that they tried to get the slate down, but finding it hard they started to work under it again with the above result. On examining the place where the accident occurred I found that a fall of roof had taken place which practically removed all evidence of the same.

Andrew Goreck, a miner, was instantly killed in Ella mine, October 29, by a fall of slate while loading a car, the slate was much troubled with slips and as a consequence required careful attention.

Arthur Dehoss, a miner, was fatally injured in Mongah mine, October 30, by a fall of slate. It is not definitely known what the deceased was doing at the time of the accident, but it is supposed that he was throwing small lumps of coal which they, father and a younger brother who worked with deceased had loaded. The father informed me that after the car was loaded they tried to get the slate down, he then left the face of room, telling the deceased at the same time not to go near the slate, it afterwards fell, resulting as stated.

On examination of the place I found a slip running parallel with the face of room, the angle of fracture against safety, except about the middle of it, where it extended over the face of the coal some nineteen inches to a point. The coroner's jury returned a verdict of accidental death.

Henry Fields, a machine helper, was fatally injured in Tremont mine, November 18, by a fall of slate. At the time of the accident the deceased and his partner, William Lutes, were on their seventh "run." On examining the place I found that the slate, which measured ten feet long two feet wide and about ten inches thick, had fallen, part of which struck the deceased; the slate was part of a former "cat" no doubt that it was made unsafe by the undermining which exposed a break slip causing it to break off from face to room.

Frank Baroskie, a driver, was instantly killed in Ellsworth No. 3, mine by a fall of sandstone. The deceased was working at night, and while waiting for the night men to load a car he fell asleep against the entry pillar, while in this condition a piece of sandstone in the shape of a slab fell on him resulting as stated. This accident occurred December 4.

On December 20, Andrew Sarney, a loader, employed at the Beaumont mine, was instantly killed by a fall of slate. The deceased and his father worked together, and at the time of the accident the latter was wedging at a piece of slate to get it down, during this time the former was standing near the roadhead and immediately behind the latter, while here another part of slate fell with the above result.

## Mines on the Monongahela and Washington Branch of the Pennsylvania Railroad.

Ellsworth Nos. 3 and 4.—Are new openings of James W. Ellsworth & Co. They are situated near the head waters of Pigeon Creek, in West Bethlehem township, Washington county, about one and one-half miles below Hillsborough, usually known as Scenery Hill. This point forms the present terminus of the railroad. The coal is cut by two shafts, 397 and 417 feet in depth respectively. They are about six hundred feet apart and were sunk simultaneously. Work was started on them in the spring of 1900, and from that time it has gone on continuously. No. 3 mine began shipping coal first in June, 1901, and No. 4 in November. They produced, jointly until the end of the year about 30,000 tons of screened coal, the underground development being yet small. These shafts are situated in the synclinal axis between the Pin Hook and Waynesburg anticlinals about twelve miles back from the outcrop of the seam on the Monongahela river. From the very nature of their location it will be observed that they are the pioneer mines with deep shafts in this region, opening and developing the vein where it lies under more than four hundred feet of cover. "The coal as far as developed has shown itself free from sulphur and foreign deleterious substances." While the floor of the seam, on account of its proximity to the basin line, is, as is usual in such cases, rolling and uneven, being more or less crimped, the quality of the coal is not affected thereby and not a single "clay vein" or "slack vein" has yet been discovered in the workings. The proposed development of this tract of coal is drawn on very simple lines; the main quartering face entries are driven to the north and south in sets of three entries from each shaft to serve as air and haulage ways. From these mains, butt entries will be turned to the east and west. The strike of the seam at this point is almost due east and west, while it dips southward; for this reason the south mains are descending, but only a little development work will be done with these entries. The butt entries to the east, although going down grade, will soon reach the basin line and will then rise along the west side of the Waynesburg anticlinal axis. The permanent plan for conducting the ventilating current has not been fully decided upon. The ventilation at both places at present is furnished by means of fourteen feet diameter Capell fans which are reversible and which up, to the present time, have been run as exhaust fans, but can be reversed in a short time and used as blowers. The shafts are in three compartments, two hoistways, used also at present as downcast airways, and one air compartment for upcast to fan. For hoisting there are at each shaft, large first motion engines, 24"x48" cylinders, with cone drums eight to ten feet in diameter, using one and one-half inch wire rope. Because of the gase-



ous nature of the coal seam, compressed air is used to operate mining machines and pumps. The air is compressed for both mines at No. 4 mine with one "Norwalk" compressor 26"x30". This compressor has furnished power for four chain machines, four punching machines and four inside drainage pumps. The pumps for the discharge from the mine are run by steam. The pump at No. 3—10"x5"x14" stroke—discharges about 115 gallons of water per minute.

This pump will be used only temporarily and will be replaced by a larger one as necessity demands. The pump at No. 4 mine, 16"x10 $\frac{1}{4}$ "x10' discharged about 171 gallons per minute, being only for temporary needs, and is to be subsequently replaced by larger ones. The outside arrangements of the two plants are very much on the same lines. The intention of furnishing compressed air for both mines from No. 4, made it necessary for a larger boiler plant and engine room there, than at No. 3, as most of the mechanical work will also be done at the same place, the machine shop is built at No. 4, though there is a smaller shop at No. 3. All the outside buildings are of brick with slate roofs. The tipples are of steel and fitted with Ramsey car pushers and transfers, double automatic dumping arrangements, and screens for all grades of coal. At No. 3 there is a battery of four "Erie" tubular 125 H. P. boilers, and at No. 4 a battery of six of the same make. Some trouble was experienced with the hardness and consequent foaming of the water in the boilers, due to carbonates of lime in solution, but this has been overcome by means of water-heaters run by the exhaust steam from fans and compressor. A reservoir of 5,500,000 gallons capacity has been built during the past year so as to have an adequate water supply during the dry season. For the accommodation of the workmen, houses have been built for fifty-six families. With the exception of a block of twelve houses that are in one long row, all are substantial frame double dwellings with at least thirty feet space between them. Care has been taken in the choice of their location to have good drainage; and deep drilled wells have been sunk to insure a pure and healthful supply of water, as well as a constant and never failing supply for all domestic purposes.

Hazel Kirk.—General condition of ventilation satisfactory. Drainage requires improvement in parts of the mine.

Ellsworth No. 1.—On examination I found this mine in much improved condition from that of a former visit as regards ventilation and drainage.

Ellsworth No. 2.—General condition of ventilation satisfactory. Drainage requires improvement in parts of the mine.

Mines Located on the Pittsburg and Wheeling Division of the Baltimore and Ohio Railroad.

Anderson, Hackett, Gastonville Nos. 1 and 2.—Idle during the entire year.

Bertha.—Is a new drift opening. It consists of five face headings and an equal number of butts. At the time of my visit there were employed inside, eight machine men, fifty-five loaders, four miners, four drivers and four other persons. The ventilation is produced by a twelve foot ventilating fan, which was producing, at the inlets 24,200 cubic feet of air per minute. Owing to neglect in not keeping the stoppings in proper condition, very little reached the working faces, and to make matters worse, rooms were opened in advance of the air current; these I directed to be vacated and the air current distributed in a legal manner.

Blanche.—Is a new drift opening. On a visit to this mine I found the ventilation and drainage in parts of the mine unsatisfactory.

Eclipse.—General condition of ventilation, fair. Drainage requires improvement in parts of the mine.

Germania.—On an examination of this mine I found the ventilation in parts very unsatisfactory, the drainage also required attention to reach requirements of law.

Nottingham.—This mine was in operation only thirty-six and one-half days during the year. While operations were suspended, extensive improvements were made in and about the mine consisting of a complete electric mining plant, ventilating fan, endless rope haulage and the relaying of the greater part of the main haulage roads. Overcasts were built, and the air current divided in a more satisfactory manner than ever before. On examination of the mine I found it, in a general way, in such condition that very little could be complained of.

Mines on the Peters Creek Branch of the Pennsylvania Railroad.

Rachel, formerly Peters Creek.—General condition of mine, fair.

Peters Creek Nos. 1 and 2, formerly Crescent Nos. 1 and 2. These are new drift openings, but not sufficiently developed for a general description in this report.

Mines on the Monongahela Division of the Pennsylvania Railroad.

Allen.—Abandoned, and the rolling stock and other movable material taken to the Acme mine.

Courtney.—Ventilation, in a general way, fair. Drainage in a very unsatisfactory condition in parts of the mine.



Buffalo and Cliff.—Not in operation during the year.

Star.—General condition of mine, satisfactory.

Fidelity.—Ventilation requires improvement in parts of the mine. General condition of drainage, fair.

Acme.—In operation 289 days during the year. Persons employed, 142. Ventilation fair, but drainage is inadequate in parts of the mine.

Little Squaw.—Taken as a whole the mine was in fair condition as regards ventilation. Parts of this mine was unsatisfactory as to the passage ways leading to the means of egress. I called the attention of the management to the matter and immediate steps were taken to remedy cause of complaint.

Charleroi No. 2.—Is a new drift opening located about three-fourths of a mile north of Charleroi No. 1. Only a few persons are employed at present.

Banner.—In fair condition as regards ventilation, but the drainage could be improved.

Shoenberger.—General condition of ventilation, satisfactory. Water, at times, makes the roads very bad. Electrical mining machines have been introduced during the year, and an electric motor for haulage.

Charleroi No. 1.—General condition of "Old Hill," fair. The "New Hill" requires improvement in ventilation. The traveling way should receive attention so as to comply with the law, this I requested those in charge to do.

#### Mines on the Pittsburg and Lake Erie Railroad.

Bunola.—Inlet air measurement 50,000. Persons employed, eighty-nine. Ventilation and drainage require improvement in parts of the mine.

Somers No. 3.—Ventilation and drainage, fair.

Arnold No. 2.—General condition of ventilation, satisfactory. Drainage inadequate in parts of the mine.

Irons.—This mine as regards the ventilation and drainage did not, on my last visit, meet the requirements of the law.

Somers No. 4.—Not in operation.

Cleveland or Somers No. 1 and North Webster were in fair condition.

Equitable.—Examination showed that the ventilation and drainage were unsatisfactory. Passage ways to the second means of egress also needed attention, and the necessary suggestions were made.

Manown.—General condition of mine, fair. On the night of February 17, a fire occurred in the power house, of this plant, which

totally destroyed it, together with the ventilating fan, housing, blacksmith shop and part of the trestle leading to the tippie. Owing to the proximity of these buildings to the entrances to the mine, I saw the possibility of fire and the consequent danger of shutting off the means of egress at the mine, and suggested that an additional opening be made so as to afford an escape way in case of an emergency, but the persons then operating the mine elected to do nothing in a practical way relative to the matter. On the present company taking charge I appealed to it, which resulted in my suggestions being complied with. Two persons were at work in the mine at the time of the fire, who would, in all probability have lost their lives if this exit had not been provided. In urging another opening it was not claimed by me that the mine openings were not legal, but that they would be useless in case of a fire in the buildings mentioned.

Arnold No. 1.—General condition of ventilation, fair. Drainage require improvement in parts of the mine.

Somers No. 5.—Formerly Bellevernon. Persons employed, twelve. The ventilation was unsatisfactory when examined. Since my visit a ventilating fan has been erected which as I am informed, is giving excellent results.

Sheppler.—I cannot say anything in regard to this mine except to call attention to what was stated in the report of 1900.

Somers No. 2.—The ventilation is fair, but drainage required improvement in parts of the mine.

### Mines on the Monongahela River.

Milesville, Gallatin, Crescent and Marine, were found in fair condition when inspected.

Old Eagle, New Eagle, Pine Run, Allequippa, Riverville, Champion and Fox.—Idle the entire year.

Abe Hays.—A new tippie will be necessary before any shipping can be done at this point.

Budd.—General condition of mine, satisfactory.

Cincinnati.—In operation 167 days. Persons employed, 193. Condition of mine when examined, fair.

Risher.—Outlet air measurements showed 50,800 cubic feet. Persons employed 163. Divisions of air three. Ventilation could be improved in parts of the mine. Drainage, satisfactory. A ventilating fan has been installed since my visit, which should produce sufficient air for the mine for some time to come.

Ella.—Owing to the extent of the excavations of this mine the air current produced by the fan does not reach the working faces in the manner required by law. To remedy this, a shaft is being sunk near the present active workings.

Mongah.—General condition of mine when examined, fair.

Layette City.—When inspected the ventilation was fair; drainage required improvement in parts of the mine.

Vesta No. 2.—General condition of mine, fair.

Black Diamond.—When inspected, the mine, in a general way, was in a satisfactory condition.

Iron City.—This mine is located about one mile south of the village of Webster. In the spring of 1883, ice and high water destroyed the tippie, since which time nothing had been done to put the plant in condition to operate until the present company acquired the property. A new tippie has been built, a gravity plane and such other improvements made as were necessary for the transportation of coal from mine to river. The mining will be done by mining machines, the power plant, for this purpose, having been well under way at the time of my visit. The ventilation at present is produced by a furnace, but it is the intention to replace this by a ventilating fan in the near future.

Vigilant, Beaumont and Hildale.—When inspected, the ventilation and drainage required improvement in parts of these mines. I have been informed that a marked difference for the better has been made since my visits.

Clyde, formerly Sanford.—On examination of this mine I found the ventilation and drainage, in parts, very unsatisfactory. The active workings were without the legal openings, although ninety-one persons were at work inside. The inlet air measurements were only eight thousand five hundred and fifty cubic feet. I gave the company peremptory notice to put the mine in such condition as is required by law, calling special attention to the matter of ventilation and openings. A Capell ventilating fan sixteen feet in diameter has been installed at the mine since my visit, and the necessary openings made.

Vesta No. 1.—This is the largest mine in the district, employing in the day and night shifts, 660 persons inside. From the time this mine was opened, except for a short time while a furnace was used, the ventilation was produced by a fan located at Vesta No. 2, but owing to the large territory excavated and the number of persons employed, it proved inadequate and a Capell fan sixteen feet in diameter was then placed in position at the former mine, which, I am informed, is giving satisfactory results.

Clipper.—Mine not in operation on last visit.

Eclipse.—General condition of drainage, satisfactory. Owing to leakage and the improper distribution of the air current, some of the workings were in a very unsatisfactory condition. Since my examination they have, as I am informed, adjusted matters so as to comply with the law.

Coal Centre.—General condition of ventilation, fair. Drainage requires improvements in parts of the mine.

Clinton.—General condition of mine, satisfactory.

Vesta No. 3.—On examining the mine the inlet air measurement showed 29,400 cubic feet. Persons employed 216, classified as follows, 180 miners, fourteen drivers and twenty-two other persons. While the drainage was satisfactory, the ventilation in parts of the workings was not such as to comply with the law. Subsequent to the inspection a ventilating fan has been installed, which, I am informed, is giving ample air.

Catsburg and Ivill.—The ventilation of these mines was, when inspected, not up to the legal requirements. General condition of drainage, fair.

Tremont.—On my last examination of this mine, the ventilation and drainage were in a very unsatisfactory condition. One hundred and seventy persons were employed inside and the only air measurement obtainable was 600 and 1,320 cubic feet respectively. The ventilating fan was exhausting 57,700 cubic feet of air per minute, but a large volume of this was from the old Tremont part of the workings, and it was practically impossible to prevent this, owing to the condition of the return to the fan. They are opening up, on the right of the main entry, a new route for the air, which, when completed, will remove a great many of the difficulties which confront them at present in regard to the ventilation, although this new passage way passes through old workings for quite a distance, they intend to line it, so as to prevent, as far as possible, any leakage of air. On a former visit I found fire damp on some falls of entry 26 in such quantities as to be dangerous, I requested that the entry and the one running parallel be vacated until the places were made safe. Some time after this, the entry was again vacated on account of gas on the falls, and danger signals were placed to warn persons not to enter the entry, but while these signals were up a miner, Otto Winberg, passed them, and on being informed, I entered suit against him before Squire J. T. Roley, of Belle Vernon who after hearing the evidence remanded the defendant to the borough lockup presumably to hold him for court, but the next morning on reaching the station on the Washington county side, and purchasing tickets for Uniontown the defendant was released, by the officers in charge, on the payment of ten dollars, this amount covered the costs in the case up to this time. I could not see how this matter should be thus dealt with, so I called, a committee of the miners for an explanation from the squire, and he informed us that there was not sufficient evidence to hold Winberg for court. This was a strange decision to say the least, as three persons testified that they saw Winberg beyond the danger signals, but the evidence was of avail be-



fore his honor. Not seeing my way clear to let the case end here, I made an information against Winberg before Squire J. A. O'Neil, of Fayette City, submitting the same evidence as before, this resulted in the defendant being held for court, together with John Mackey, who I afterwards found had been with Winberg when he passed the danger signals. In the trial a verdict of guilty was rendered.

Dilworth.—Is a new shaft opening located about one-half mile north of Rices Landing. Description of this plant will be left to a future report as the coal has only been reached.

Rostraver.—Ventilation and drainage requires improvement in parts of the mine.

Camden, Rock Run, Apollo, Walton, Lower and Upper.—These mines ceased operations before I could reach them in my tour of inspections.

Little Redstone.—Not in operation when visited.

Knob.—Did not visit this mine while in operation.





Crescent Coal Co.	Allegheny,	Harry Kinloch,	Epton,	Peters Creek Branch of P. R. R.
*Crescent No. 1.	Allegheny,	Harry Kinloch,	Epton,	Peters Creek Branch of P. R. R.
*Crescent No. 2.	Washington,	R. B. Drum,	California,	M. D. of the P. R. R.
Vesta Coal Co.	Washington,	R. B. Drum,	California,	M. D. of the P. R. R.
Vesta No. 1.	Washington,	R. B. Drum,	California,	M. D. of the P. R. R.
Vesta No. 2.	Washington,	R. B. Drum,	California,	M. D. of the P. R. R.
Vesta No. 3.	Washington,	R. B. Drum,	California,	M. D. of the P. R. R.
Vesta No. 4.	Washington,	R. B. Drum,	California,	M. D. of the P. R. R.
James W. Ellsworth & Co.	Washington,	Benjamin Holliday,	Ellsworth,	M. & W. B. of P. R. R.
Ellsworth No. 1.	Washington,	Benjamin Holliday,	Ellsworth,	M. & W. B. of P. R. R.
Ellsworth No. 2.	Washington,	David Thomas,	Scenery Hill,	M. & W. B. of P. R. R.
Ellsworth No. 3.	Washington,	David Thomas,	Scenery Hill,	M. & W. B. of P. R. R.
Ellsworth No. 4.	Washington,	David Thomas,	Scenery Hill,	M. & W. B. of P. R. R.
Henderson Coal Co.	Westmoreland,	W. M. Henderson,	Charleroi,	M. D. of the P. R. R.
Irons,	Washington,	H. W. Croft,	Pittsburg,	M. D. of the P. R. R.
Star,	Allegheny,	David Orr,	Braughton,	P. & W. D. of B. & O.
Star Coal Co.	Washington,	David Orr,	Braughton,	P. & W. D. of B. & O.
Bertha,	Allegheny,	David Orr,	Braughton,	P. & W. D. of B. & O.
Blanche,	Washington,	David Orr,	Braughton,	P. & W. D. of B. & O.
Budd,	Westmoreland,	A. G. Leonard,	Webster,	P. and L. E. R. R.
A. R. Budd,	Washington,	Lute Hornickel,	Monongahela,	M. & W. B. of P. R. R.
Hazel Kirk Gas Coal Co.	Allegheny,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Hazel Kirk,	Greene,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Bunola Mining Co.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Bunola,	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Dilworth Coal Co.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Dilworth,	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Shoenberger Coal Co.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Shoenberger,	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Clyde,	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Clyde Coal Co.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Acme,	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Stockdale Coal Co.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Allen,	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Allen Coal Co.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Charleroi Coal Works.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Charleroi No. 1.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.
Charleroi No. 2.	Washington,	John M. Crawford,	Bunola,	P. and L. E. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
W. H. Flint & Co. Iron City.	Westmoreland.			W. H. Flint.	Pittsburg.	P. and L. E. R. R.
Marine Coal Co. Marine.	Fayette.			W. S. Gibson.	Fayette City.	P. and L. E. R. R.
Morris Bailey Coal Co. Peters Creek.	Allegheny.	W. J. Morris.	Pittsburg.	W. J. Neilson.	Coal Valley.	Peters Creek Branch of P. R. R.
Ella.	Westmoreland.	G. A. Magoon.	Pittsburg.	A. E. Speakman.	Sunny Side.	P. and L. E. R. R.
Ella.	Westmoreland.	G. A. Magoon.	Pittsburg.	A. E. Speakman.	Sunny Side.	P. and L. E. R. R.
Pittsburg Coal Co. Anderson.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	P. & W. D. of B. & O.
Arnold No. 1.	Fayette.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Arnold No. 2.	Fayette.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Arnold No. 3.	Fayette.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Banner.	Washington.	G. W. Schluederberg.	Pittsburg.	H. B. H. Louttit.	Monongahela.	M. D. of the P. R. R.
Buffalo.	Washington.	G. W. Schluederberg.	Pittsburg.	H. B. H. Louttit.	Monongahela.	M. D. of the P. R. R.
Cliff.	Washington.	G. W. Schluederberg.	Pittsburg.	H. B. H. Louttit.	Monongahela.	M. D. of the P. R. R.
Conrad.	Washington.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Corbett.	Washington.	G. W. Schluederberg.	Pittsburg.	H. B. H. Louttit.	Monongahela.	M. D. of the P. R. R.
Equitable.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	William Gibson.	Manown.	P. and L. E. R. R.
Fidelity.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	M. D. of the P. R. R.
Germania.	Washington.	G. W. Schluederberg.	Pittsburg.	H. B. H. Louttit.	Monongahela.	M. D. of the P. R. R.
Gastonville No. 1.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	M. D. of the P. R. R.
Gastonville No. 2.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	M. D. of the P. R. R.
Hackett.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	M. D. of the P. R. R.
Little Squaw.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	M. D. of the P. R. R.
Manown.	Allegheny.	G. W. Schluederberg.	Pittsburg.	H. B. H. Louttit.	Monongahela.	M. D. of the P. R. R.
North Wehster.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	William Gibson.	Manown.	P. and L. E. R. R.
Nottingham.	Washington.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	P. & W. D. of B. & O.
Omaha.	Washington.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Somers No. 1.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Somers No. 2.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Somers No. 3.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Somers No. 4.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Somers No. 5.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.
Snowden.	Allegheny.	G. W. Schluederberg.	Pittsburg.	W. B. McCoy.	Finleyville.	P. & W. D. of B. & O.
Sheplar.	Westmoreland.	G. W. Schluederberg.	Pittsburg.	John Reese.	Bellevorn.	P. and L. E. R. R.

\*Now Peters Creek.

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employes, number of persons killed and injured, number of kegs of powder, etc., used in the First Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
M. R. C. C. and C. Co.												
Apollo, .....	Fayette,	100,800	660	.....	101,460	87	247	.....	.....	1,800	.....	15
Black Diamond, .....	Washington,	122,782	456	.....	123,310	188	181	.....	4	1,200	.....	14
Cammont, .....	Washington,	153,484	1,440	1,532	156,456	216	183	1	2	2,712	.....	14
Coal Bluff, .....	Allegheny,	151,476	281	423	153,980	97	148	.....	.....	500	.....	9
Cincinnati, .....	Washington,	158,471	2,038	.....	159,268	189	170	1	1	1,500	.....	17
Catsburg, .....	Washington,	232,002	1,083	.....	233,184	293	214	3	.....	1,500	.....	13
Clipper, .....	Washington,	153,708	1,171	4,214	158,998	89	105	.....	3	1,200	.....	7
Crescent, .....	Washington,	150,240	1,446	24	151,710	237	151	.....	3	610	.....	15
Eclipse, .....	Fayette,	234,143	2,537	212	236,892	257	210	2	.....	1,500	.....	17
Fayette City, .....	Washington,	161,416	3,064	820	165,300	140	232	.....	3	2,000	.....	16
Galtin, .....	Washington,	152,996	2,860	400	156,256	220	208	2	9	600	.....	18
Hilldale, .....	Washington,	155,337	214	.....	155,556	137	158	.....	.....	100	.....	7
Ivill, .....	Washington,	121,249	1,273	.....	122,522	170	166	1	7	500	.....	14
Knob, .....	Washington,	126,253	2,317	.....	129,238	158	256	.....	4	2,340	.....	16
Little Redstone, .....	Fayette,	180,855	1,963	668	183,312	209	190	1	2	700	.....	20
Millsville, .....	Allegheny,	206,462	2,590	494	208,962	252	255	2	10	600	.....	13
Rock Run, .....	Allegheny,	120,606	1,376	348	121,404	182	163	1	3	810	.....	13
Risher, .....	Allegheny,	172,598	1,240	3,552	177,072	239	235	.....	.....	25	.....	19
Rostover, .....	Westmoreland,	88,472	1,002	2	89,474	200	102	.....	2	50	.....	7
Tremont, .....	Fayette,	206,845	7,080	185	214,110	237	234	3	2	1,800	.....	19
Vigilant, .....	Washington,	118,940	833	4,377	124,150	221	182	.....	.....	2,168	.....	20
Walton, .....	Allegheny,	91,812	364	244	92,420	107	278	1	3	450	.....	20
Total, .....		3,279,946	35,813	18,294	3,334,053	180	4,595	20	67	24,495	.....	353



TABLE II—Continued.

Names of Operators and Collieries.	County.											
		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Pittsburg Coal Co.												
Arnold No. 1.	Fayette.	258,415	3,939	543	262,897	170½	297	1	4	1,635	.....	19
Arnold No. 2.	Fayette.	140,430	1,259	214	141,913	172.94	116	.....	3	828	.....	12
Banner.	Washington.	56,498	1,337	166	58,251	134½	86	1	.....	216	.....	9
Cleveland.	Fayette.	298,118	2,023	1	211,142	202	198	.....	7	1,500	100	17
Courtney.	Washington.	96,812	332	353	37,236	155½	59	1	.....	174	.....	16
Equitable.	Westmoreland.	139,936	1,493	873	148,788	182½	140	1	.....	1,239	6.0	20
Empire.	Washington.	24,961	34	51	151,628	118½	176	1	.....	1,329	.....	3
Fidelity.	Washington.	128,277	240	137	95,165	118½	37	.....	1	1,076	.....	18
Germania.	Washington.	168,689	699	281	169,46	233¾	126	1	.....	.....	.....	12
Little Squaw.	Allegheny.	23,279	612	266	24,697	49	93	.....	3	.....	.....	9
Manowb.	Westmoreland.	54,750	2,717	393	57,860	200.94	131	1	.....	500	.....	10
North Webster.	Washington.	32,567	713	77	33,257	33.4	105	2	.....	600	.....	23
Nottingham.	Westmoreland.	263,252	2,396	1,020	266,378	209½	296	.....	.....	1,673	300	15
Somers No. 2-4.	Westmoreland.	63,564	37	.....	63,541	184½	65	.....	.....	411	500	8
Somers No. 3.	Westmoreland.	1,463	1	49	1,513	52	40	.....	.....	17	50	2
Snowden.	Allegheny.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	1,745,985	21,490	4,554	1,772,929	157	1,975	6	36	10,366	1,550	192
People's Coal Co.												
Clinton.	Allegheny.	52,095	441	.....	52,540	235	134	.....	2	.....	.....	10
Marine Coal Co.												
Marine.	Fayette.	63,460	440	60	63,920	193	175	1	4	500	.....	10



Vesta Coal Co.		Washington.	645,492	11,732	1,378	658,212	215½	700	2	1	3,000	500
Vesta No. 1.	Washington.	2,815	3,969	1,676	242,788	341	175	175	2	2	1,600	20
Vesta No. 2.	Washington.	578,642	2,049		380,691	561	228	228		2		16
Vesta No. 3.	Washington.											
Vesta No. 4.	Washington.											
Total.		1,291,947	17,730	3,054	1,292,731	272½	1,106	2	5	5,400	50	86
C. Little & Co.		Washington.	46,032	760	289	46,082	216½	158		1		11
James W. Ellsworth & Co.		Washington.	51,910	4,355	168	56,273	222	145				6
Ellsworth No. 1.	Washington.	4,170	716	416	43,463	282	91	1	1		8,133	4
Ellsworth No. 2.	Washington.	27,332	2,802	136	36,190	133	33	1			6,433	4
Ellsworth No. 3.	Washington.										4,975	2
Ellsworth No. 4.	Washington.										2,613	2
Total.		119,618	9,468	780	139,895	168	324	2	1		22,200	15
Henderson Coal Co.		Westmoreland.	65,240			65,240	261	67	1			
Star Coal Co.		Washington.	23,542	1,500	457	41,869	133	115		2	20	7
John H. Jones.		Allegheny.	54,230	700	100	55,039	147¼	96	1	1		
Bentley.	Washington.	42,604	700	100	43,464	201¼	67	67				
Blanche.	Washington.											
Total.		96,963	1,400	200	98,563	174¼	163	1	1			
A. R. Budd.		Westmoreland.	47,000	250		47,250	235	119				
B. Braznell & Son.		Washington.	21,459		650	25,169	151	28				
Charlton Coal Works.		Washington.	265,500	2,520		268,020	242	206	2		412	200
Charlton No. 1.	Washington.	2,083			2,083			1				16
Charlton No. 2.	Washington.											
Total.		267,583	2,520		270,103	242	213	2	2		412	200
W. H. Flint & Co.		Westmoreland.								1		
Iron City.		Allegheny.	47,501			47,501	229	91		1		
Marris-Bailey Coal Co.		Allegheny.										
Peters Creek.	Allegheny.											
Ella Coal Co.		Allegheny.	182,186	2,537	1,326	187,063	262	233	1	8		21

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Hazel Kirk Gas Coal Co.	Washington, .....	72,827	2,190	280	75,302	222	167	2	4	282	4,500	8
Hazel Kirk, .....	Washington, .....	116,505	1,911	664	119,080	245	121	.....	.....	.....	.....	12
Bunola, .....	Allegheny, .....	182,555	600	300	184,455	280	218	.....	5	1,000	209	18
Shoenberger Coal Co.	Washington, .....	65,918	500	.....	66,418	223½	74	.....	1	.....	.....	6
Clyde, .....	Washington, .....	207,414	700	1,000	209,114	242	118	3	3	1,200	.....	10
Acme, .....	Washington, .....	7,975,495	101,250	31,513	8,108,658	*213½	10,195	41	142	43,884	20,240	775
Grand total, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Average.

TABLE II.—Continued.

Names of Operators.	County.	Number of Boilers.			Total horse power.			Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Total horse power.		Steam.	Alt.	Electric.							
Monongahela River C. C. and C. Co.,	.....	1	75	72	1,995	6,400	2	.....	7	.....	60	4,271	24	5,886	2,830	11	3
Pittsburg Coal Co.,	.....	13	480	23	2,265	2,665	.....	.....	6	.....	35	2,552	15	3,416	2,174	10	2
People's Coal Co.,	Allegheny.	.....	.....	2	2,150	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Marine Coal Co.,	Allegheny.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vesta Coal Co.,	Fayette.	4	152	11	2,350	2,450	.....	.....	1	.....	10	960	7	744	425	1	8
C. Jutte & Co.,	Washington.	1	100	.....	1	30	.....	.....	.....	.....	5	118	3	213	107	.....	.....
James W. Ellsworth & Co.,	Washington.	2	120	20	2,500	2,500	.....	.....	.....	.....	16	2,610	4	1,450	500	1	3
Henderson Coal Co.,	Washington.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Star Coal Co.,	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
John H. Jones,	Washington.	1	20	2	300	200	.....	.....	.....	.....	3	438	.....	.....	.....	2	.....
A. R. Budd,	Allegheny & Wash.	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
B. Braznell & Son,	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. H. Platts & Sons,	Washington.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. H. Platts & Sons,	Washington.	.....	.....	5	480	480	.....	.....	2	.....	4	480	4	415	415	2	.....
Morris-Railley Coal Co.,	Washington.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellis Coal Co.,	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hazel Kirk Gas Coal Co.,	Allegheny.	.....	.....	3	321	.....	.....	.....	2	.....	.....	680	.....	.....	.....	.....	.....
Bunola Mining Co.,	Allegheny.	.....	.....	2	150	300	.....	.....	.....	.....	.....	525	.....	.....	.....	.....	.....
Shoenberger Coal Co.,	Washington.	.....	.....	2	140	140	.....	.....	.....	.....	.....	155	.....	.....	.....	.....	.....
Clyde Coal Co.,	Allegheny.	.....	.....	2	200	200	.....	.....	1	.....	2	135	.....	.....	.....	.....	.....
Stockdale Coal Co.,	Washington.	.....	.....	1	300	300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	Washington.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total,	.....	22	947	151	11,384	16,265	2	.....	22	.....	153	12,739	67	12,871	6,709	34	11

TABLE III.—Showing the number of each class of employees at each colliery in the First Bituminous District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.					Occupations of Persons Employed Outside.					Grand total, inside and outside.					
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.		Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.
Mt. Mansfield River Consolidated Coal and Coke Co.		1	1	200	.....	15	.....	5	225	1	.....	.....	.....	.....	10	19	247
Adella, .....	Fayette	1	1	135	.....	10	.....	16	167	.....	.....	.....	.....	.....	7	14	181
Black Diamond, .....	Washington	1	1	135	.....	13	.....	11	165	1	.....	.....	.....	.....	8	18	183
Bearmont, .....	Washington	1	1	115	.....	11	.....	5	128	.....	.....	.....	.....	.....	16	20	148
Cameron, .....	Allegheny	1	1	124	.....	11	.....	7	149	.....	.....	.....	.....	.....	11	21	170
Coal Bluff, .....	Washington	1	1	148	.....	14	.....	12	172	.....	.....	.....	.....	.....	13	21	193
Criminatti, .....	Washington	1	4	161	.....	15	.....	40	223	.....	.....	.....	.....	.....	17	21	244
Cashburg, .....	Washington	1	1	86	.....	7	.....	1	94	.....	.....	.....	.....	.....	9	17	111
Clippert, .....	Washington	1	1	120	.....	16	.....	17	159	.....	.....	.....	.....	.....	19	29	210
Crescent, .....	Washington	1	1	177	.....	16	.....	12	210	.....	.....	.....	.....	.....	22	30	232
Edgese, .....	Fayette City.	1	1	130	.....	14	.....	26	178	.....	.....	.....	.....	.....	11	22	208
Galatin, .....	Allegheny	1	1	135	.....	11	.....	3	147	.....	.....	.....	.....	.....	5	11	158
Galatin, .....	Washington	1	1	131	.....	11	.....	9	144	.....	.....	.....	.....	.....	10	18	166
Knob, .....	Washington	1	2	172	.....	16	.....	14	211	.....	.....	.....	.....	.....	14	25	236
Little Redstone, .....	Fayette	1	1	125	.....	19	.....	20	169	.....	.....	.....	.....	.....	11	21	190
Mansfield, .....	Allegheny.	1	1	150	.....	18	.....	4	185	.....	.....	.....	.....	.....	20	30	225
Milesville, .....	Allegheny.	1	1	113	.....	12	.....	18	149	.....	.....	.....	.....	.....	7	14	173
Rock Run, .....	Allegheny.	1	1	125	.....	10	.....	1	136	.....	.....	.....	.....	.....	10	14	153
Risher, .....	Allegheny	1	1	180	.....	14	.....	6	201	.....	.....	.....	.....	.....	16	18	216
Restraiver, .....	Westmoreland.	1	1	71	.....	7	.....	.....	90	.....	.....	.....	.....	.....	31	32	224
Trenton, .....	Fayette.	1	1	148	.....	19	.....	27	204	.....	.....	.....	.....	.....	13	23	227
Viant, .....	Washington.	1	1	28	.....	20	.....	5	73	.....	.....	.....	.....	.....	13	23	112
Walton, .....	Allegheny.	1	1	226	.....	16	.....	6	255	.....	.....	.....	.....	.....	13	23	278
Total, .....		25	31	3,358	.....	419	68	394	4,105	3	65	83	47	292	409	4,565	

Pittsburg Coal Co.												
Arnold Nos. 1-3, .....	1	3	150	.....	18	8	6	186	.....	2	11	21
Arnold No. 2, .....	1	1	50	.....	10	2	10	74	.....	1	6	12
Branner, .....	1	1	55	.....	9	.....	8	54	.....	1	5	10
Cleveland, .....	1	1	135	.....	17	4	15	174	.....	2	12	24
Courtney, .....	1	1	40	.....	5	.....	1	50	.....	1	4	9
Equitable, .....	1	1	94	.....	10	2	14	132	.....	1	9	18
Felise, .....	1	2	116	.....	13	5	5	154	.....	1	12	22
Fidelity, .....	1	.....	30	.....	2	.....	1	34	.....	1	2	3
Germania, .....	1	.....	96	.....	12	3	3	106	.....	1	14	20
Little Squaw, .....	1	1	50	.....	11	2	11	115	.....	1	10	15
Manown, .....	1	1	55	.....	6	2	11	76	.....	2	7	17
North Webster, .....	1	1	83	.....	10	3	13	112	.....	1	11	19
Nottingham, .....	1	1	69	.....	10	4	5	90	.....	1	15	16
Nottingham, .....	2	2	170	.....	12	7	39	222	.....	1	26	34
Somers Nos. 2-4, .....	1	.....	19	.....	3	1	10	60	.....	1	3	5
Somers No. 3, .....	1	.....	12	.....	3	.....	12	28	.....	1	12	12
Somers No. 5, .....	1	.....	12	.....	3	.....	12	28	.....	1	12	12
Total, .....	17	18	1,369	28	152	41	349	1,714	6	29	47	261
People's Coal Co.												
Clinton, .....	1	1	86	.....	10	.....	.....	119	1	2	2	8
Marine Coal Co.												
Marine, .....	1	1	100	.....	10	1	2	125	.....	2	2	44
C. Jutte & Co.												
Coal Centre, .....	2	1	123	.....	3	10	1	140	1	2	2	18
Vesta Coal Co.												
Vesta No. 1, .....	3	3	579	.....	50	8	17	660	1	4	12	40
Vesta No. 2, .....	1	1	131	.....	14	3	8	158	1	3	4	17
Vesta No. 3, .....	1	2	161	.....	20	4	15	243	1	3	6	25
Total, .....	5	6	871	.....	84	15	40	1,021	3	8	22	82
James W. Ellsworth & Co.												
Ellsworth No. 1, .....	1	1	65	.....	6	3	45	121	.....	3	3	24
Ellsworth No. 2, .....	1	1	55	.....	4	2	30	73	.....	1	1	12
Ellsworth No. 3, .....	1	1	15	.....	3	1	15	36	.....	1	1	18
Ellsworth No. 4, .....	1	1	10	.....	2	.....	10	24	.....	2	1	17
Total, .....	4	4	125	.....	15	6	100	254	.....	9	14	70
Henderson Coal Co.												
Irons, .....	1	.....	46	.....	3	2	1	53	.....	1	.....	8
Star Coal Co.												
Star, .....	1	1	81	.....	7	2	8	101	.....	1	3	10
Total, .....												
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TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Inside foreman or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.		Total outside.
John H. Jones.																	
Bertha. ....	Allegheny. ....	1	.....	60	4	6	1	5	77	.....	2	2	2	2	11	19	96
Blanche. ....	Washington. ....	1	.....	35	2	5	.....	11	54	.....	1	3	1	3	5	13	67
Total. ....		2	.....	95	6	11	1	16	131	.....	3	5	3	5	16	32	163
A. R. Budd.																	
Budd. ....	Westmoreland. ..	1	.....	87	.....	7	2	4	101	1	2	2	.....	1	12	18	119
Hazel Kirk Gas Coal Co.																	
Hazel Kirk. ....	Washington. ....	1	1	123	.....	9	2	12	148	1	2	3	.....	2	11	19	167
Bunola. ....																	
Bunola Mining Co.	Allegheny. ....	1	.....	84	3	12	2	7	109	1	2	2	.....	2	5	12	121
Shoenberger Coal Co.																	
Shoenberger. ....	Washington. ....	1	1	182	1	12	2	4	203	.....	3	2	2	2	6	15	218
Clyde. ....																	
Clyde Coal Co.	Washington. ....	1	.....	50	3	6	1	.....	61	1	2	2	.....	.....	8	13	74
Acme. ....																	
Acme. ....	Washington. ....	1	.....	95	.....	5	1	3	105	.....	2	1	.....	2	8	13	118



TABLE III.—Continued.

Name of Operator	County	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Mammoth & River Con. C. and C. Co., .....	Allegheny, .....	17.2	9.3	14.1	18.2	21.4	19.8	12.9	13.2	12	14.9	11.7	12.2	179
Pittsburg Coal Co., .....	Allegheny, .....	11.4	7.7	22.5	9.5	11.6	15.5	16.1	16.2	23	14.3	1	14.2	153.8
Peoples Coal Co., .....	Allegheny, .....	26	19	12	18	22	17	26	24	23	25	4	14.2	235
Marine Coal Co., .....	Allegheny, .....	3	12	12	18	15	17	22	23	18	23	23	19	193
Victory Coal Co., .....	Allegheny, .....	25	13.4	19.3	15.4	10	20.3	19.3	23	11.3	21.1	23	14.3	216.5
Yates Coal Co., .....	Allegheny, .....	21.1	17	23.3	21.3	25.1	22.8	22.3	25.5	22.6	23.5	21	25.6	272.1
James W. Ellsworth & Co., .....	Allegheny, .....	1.7	5.7	7.2	12.7	11.7	14.7	13.2	20.2	18.7	20	18	18	107.8
Henderson Coal Co., .....	Allegheny, .....	21	22	22	15	25	23	25	23	21	22	22	20	261
Star Coal Co., .....	Allegheny, .....	.....	.....	.....	17	24	18	18	16	13	8	14	10.5	133
John H. Jones, .....	Allegheny & Wash., .....	.....	.....	3	7	20	6-10	23	5-10	19	21.1	17	17.6	151.6
A. R. Budd, .....	Westmoreland, .....	15	26	22	24	23	24	18	16	11	19	20	20	255
Hazel Kirk Gas Coal Co., .....	Westmoreland, .....	5	4	17	16	33	35	35	21	21	19	20	16	232
Ranola Mining Co., .....	Allegheny, .....	28	18	21	20	20	25	21	21	22	24	23	17	252
Schenberger Coal Co., .....	Allegheny, .....	23	22	25	24	24	24	19	21	23	24	23	20	286
Clyde Coal Co., .....	Allegheny, .....	21	19	17	17	33	23	19.4	18	23	19.4	23	20	231.2
Stockdale Coal Co., .....	Allegheny, .....	24	21	17	19	21	23	27	22	17	17	22	15	212
E. Frazzini & Son, .....	Allegheny, .....	24	21	17	19	21	23	10	11	9	9	.....	.....	151
Marshall & Adams, .....	Allegheny, .....	21	19	23	23	24	24	23	21	17	16	18	13	212
Morris & Bailey Coal Co., .....	Allegheny, .....	28	20	30	17	17	24	24	21	21	25	18	.....	229
Ellis Coal Co., .....	Westmoreland, .....	21	22	24	19	21	23	18	24	22	25	21	22	262
Average, .....	.....	14.6	10.2	13.5	15.6	18.4	19.1	16.9	16.8	15.4	16.7	15.4	14.4	.....

TABLE IV.—List of fatal accidents that occurred in and about the mines of the First Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Acc. lent in Brief.
Feb. 8	Michael Tomashuk.	Slav.	Miner.	28	M.	1	2	Catsburg.	Washington.	Instantly killed by a fall of slate.
March 16	Joseph Loveskic.	Pole.	Miner.	43	M.	1	4	Cincinnati.	Washington.	Instantly killed by a fall of slate.
22	John Ozzella.	Austrian.	Miner.	32	M.	1	1	Gallatin.	Allegheny.	Instantly killed by a fall of slate.
25	Stanny Stescher.	Pole.	Miner.	42	M.	1	3	Ellsworth No. 2.	Washington.	Instantly killed by being struck by ascending cage.
April 12	John Kornopshie.	Pole.	Miner.	41	M.	1	1	Eclipse River.	Washington.	Instantly killed by a fall of slate.
16	Elias Carlson.	Finn.	Miner.	45	M.	1	1	Vesta No. 1.	Washington.	Instantly killed by a fall of slate.
19	August Stirling.	French.	Miner.	39	S.	.....	.....	Charleroi.	Washington.	Fatally injured by a fall of slate.
23	Alexander Lee.	American.	Miner.	33	S.	.....	.....	Walton, Upper.	Allegheny.	Fatally injured by a fall of slate.
26	John Pawka.	Slav.	Miner.	31	M.	1	2	Acone.	Washington.	Instantly killed by a fall of slate.
28	John Chutka.	Slav.	Miner.	28	S.	.....	.....	Charleroi.	Washington.	Instantly killed by a fall of slate.
30	Andrew Michalski.	Hungarian.	Miner.	17	S.	.....	.....	Acone.	Washington.	Instantly killed by a fall of slate.
31	James Gallagher.	American.	Miner.	45	M.	1	3	Coal Bluff.	Washington.	Fatally injured by being caught by a car.
13	Michael Haladrich.	Pole.	Miner.	26	S.	.....	.....	Catsburg.	Washington.	Instantly killed by a fall of slate.
21	James Elakely.	English.	Miner.	55	M.	1	1	Courtnay.	Washington.	Instantly killed by a fall of slate.
27	Joseph Yuhar.	Pole.	Miner.	22	M.	1	1	Gallatin.	Allegheny.	Fatally injured by a piece of slate sliding on him.
June 9	John Repuskie.	German.	Miner.	30	M.	1	3	Ivill.	Washington.	Fatally injured by being caught between instantly killed
12	Frank Fisher.	Pole.	Miner.	61	S.	.....	.....	Cincinnati.	Washington.	Instantly killed by being caught by an empty dilly trip.
21	Jeremiah Cavanaugh.	Irish.	Miner.	40	M.	.....	.....	Milesville.	Allegheny.	Instantly killed by a fall of slate.
24	George Jacob.	Slav.	Miner.	33	M.	1	1	Irons.	Westmoreland.	Instantly killed by a premature blast.
July 1	John Carey.	Hungarian.	Miner.	51	M.	1	6	Mongah.	Allegheny.	Instantly killed by a fall of slate.
1	Michael Holavart.	Hungarian.	Miner.	24	M.	1	.....	Acone.	Washington.	Instantly killed by a fall of horse back roof.
16	Petro Bashelli.	Italian.	Miner.	59	M.	1	3	Tremont.	Fayette.	Fatally injured by a fall of coal and slate.
17	John Christa.	Slav.	Hand.	45	M.	1	1	Little Redstone.	Fayette.	Killed instantly by a fall of rock.
Aug. 1	William Keeling.	English.	Miner.	42	M.	1	.....	Eclipse River.	Washington.	Fatally injured by a fall of coal and slate.
1	Louis Jones.	American.	Miner.	.....	S.	.....	.....	Catsburg.	Washington.	Fatally injured by a fall of slate.
2	August Kentalo.	Finn.	Miner.	26	M.	1	4	Vesta No. 1.	Washington.	Instantly killed by a fall of slate.
3	Metrey Knezic.	Bohemian.	Miner.	64	S.	.....	.....	Eclipse Railroad.	Washington.	Instantly killed by a fall of slate.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and cause of Accident in Brief.
17	John Johnson, .....	Finn, .....	Miner, .....	24	M.	1	1	Tremont, .....	Fayette, ....	Instantly killed by a fall of slate.
19	John McMann, .....	American, ..	Driver, .....	27	M.	1	1	Marine, .....	Fayette, ....	Fatally injured by being kicked by a mule.
20	William Smith, .....	English, ....	Check weigh-man, .....	41	M.	1	1	Banner, .....	Washington,	Fatally injured by being struck by a partition which had been struck by a runaway car.
Sept. 23	James Parker, .....	Canadian, ...	Miner, .....	20	S.	1	1	Arnold No. 1, ....	Fayette, ....	Killed instantly by a fall of shale.
23	Peter Bravoskie, .....	Slav, .....	Miner, .....	32	M.	1	1	Hazel Kirk, .....	Washington,	Instantly killed; caught by an ascending cage.
Oct. 1	Stanke Cladith, .....	Austrian, ....	Miner, .....	29	M.	1	1	Hazel Kirk, .....	Washington,	Instantly killed by a fall of slate.
1	Stanke Cladith, .....	Austrian, ....	Miner, .....	27	M.	1	1	Germania, .....	Washington,	Instantly injured by a fall of slate.
22	William E. Smith, .....	English, ....	Miner, .....	47	M.	1	1	Wasson, .....	Washington,	Fatally injured by a fall of slate.
23	William E. Smith, .....	English, ....	Miner, .....	47	M.	1	1	Wasson, .....	Washington,	Fatally injured by a fall of slate.
24	George Archak, .....	Slav, .....	Miner, .....	28	M.	1	1	Perthia, .....	Allegheny, ...	Fatally injured by a fall of slate.
24	Andrew Gorch, .....	German, ....	Miner, .....	43	M.	1	2	Ella, .....	Allegheny, ...	Instantly killed by a fall of slate.
24	Arthur Tabor, .....	French, .....	Miner, .....	15	S.	1	1	Mansah, .....	Allegheny, ...	Fatally injured by a fall of slate.
Nov. 18	Henry Fols, .....	American, ...	Machinery helper, .....	25	M.	1	4	Tremont, .....	Fayette, ....	Instantly killed by a fall of slate.
Dec. 1	Frank Earskie, .....	Russian Pole, .....	Driver, .....	21	S.	1	1	Ellsworth No. 2, .....	Washington,	Instantly killed by a fall of roof.
29	Andrew Sarney, .....	Slav, .....	Loader, .....	25	S.	1	1	Beaumont, .....	Washington,	Instantly killed by a fall of slate.



TABLE V.—List of non-fatal accidents that occurred in and about the mines of the First Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	5 Matthew Kiley, .....	American	Driver, .....	29	S.	Shoenberger, .....	Washington, ..	Hand crushed and cut; caught between cars.
8	Thomas Furlong, .....	American	Leader, .....	21	S.	Coal Bluff, .....	Washington, ..	Injured by a fall of slate.
9	Emilio Romero, .....	Italian	Miner, .....	25	S.	Cleveland, .....	Fayette, .....	Injured by being struck by a piece of slate.
11	Brand-n Vencelaskey, .....	Pole, .....	Miner, .....	29	S.	Eclipse, Railroad, .....	Washington, ..	Back bruised by a fall of slate.
15	Jacob Farring, .....	German, .....	Driver, .....	21	M.	Shoenberger, .....	Washington, ..	Hand cut between car and pillar.
16	John Fouldel, .....	American, .....	Miner, .....	15	S.	Walton, Upper, .....	Washington, ..	Leg broken by a fall of coal and slate.
17	Andrew Cokelerie, .....	Pole, .....	Miner, .....	26	S.	Coal Centre, .....	Allegheeny, .....	Injured by a fall of coal and slate.
19	John B. Burt, .....	Hungarian, .....	Miner, .....	69	S.	Somers No. 2, .....	Washington, ..	Back injured by a fall of slate.
23	Stephen Tice, .....	American, .....	Miner, .....	28	S.	Walton, Upper, .....	Washington, ..	Leg broken by a fall of slate.
24	Thomas Fagan, .....	American, .....	Driver, .....	18	S.	Cleveland, .....	Allegheeny, .....	Leg broken by a fall of slate.
27	John Anders, .....	American, .....	Cutter, .....	40	M.	Monahan, .....	Fayette, .....	Wrist lacerated by fallings.
3	James Miller, Sr., .....	Scotch, .....	Driver, .....	37	M.	Fayette City, .....	Fayette, .....	Injured by cars.
4	Michael Hoosick, .....	Slav, .....	Leader, .....	52	M.	Arnold No. 2, .....	Fayette, .....	Ankle broken by fall of slate.
5	Herbert Clark, .....	English, .....	Engineer, .....	24	M.	Shoenberger, .....	Washington, ..	Internal injuries by fall of slate.
7	James Miller, .....	Scotch, .....	Pick boy, .....	16	S.	Fayette City, .....	Fayette, .....	Thigh dislocated; caught between car and coal pillar.
12	John Humbrook, .....	Slav, .....	Miner, .....	19	S.	Crosscut, .....	Washington, ..	Injured by cars.
25	Antonio Pirinelli, .....	Italian, .....	Miner, .....	37	M.	Catsburg, .....	Washington, ..	Knee dislocated by fall of slate.
March	Andrew Valsko, .....	Hungarian, .....	Leader, .....	37	M.	Gallatin, .....	Allegheeny, .....	Leg broken by fall of coal and slate.
7	John Rouse, .....	American, .....	Miner, .....	35	M.	Ella, .....	Allegheeny, .....	Leg broken by a fall of coal and slate.
21	William Fulmer, .....	American, .....	Driver, .....	24	S.	Cleveland, .....	Fayette, .....	Run over by a car.
23	Henry Backed, .....	American, .....	Miner, .....	40	S.	Fayette City, .....	Fayette, .....	Ankle bruised by slate rolling against it.
33	Frank Lawrea, .....	Italian, .....	Miner, .....	63	S.	Eclipse, Railroad, .....	Washington, ..	Leg broken by a fall of coal.
35	David Spencer, .....	American, .....	Machine man, .....	26	S.	Trenton, .....	Fayette, .....	Injured by the chain of a mining machine.
April	John Votauer, .....	American, .....	Miner, .....	19	S.	Mongah, .....	Allegheeny, .....	Foot and arm injured by cars.
4	John Neil, .....	Italian, .....	Miner, .....	25	M.	Hotel Kirk, .....	Washington, ..	Collar bone fractured by fall of coal.
10	John Neil, .....	Scotch, .....	Miner, .....	60	M.	Bedford, .....	Washington, ..	Injured; caught between cars.
11	Christopher Kirker, .....	German, .....	Miner, .....	35	M.	Eclipse, River, .....	Washington, ..	Leg broken by a car.
15	William Fuller, .....	American, .....	Stone mason, .....	54	M.	Walton, Lower, .....	Allegheeny, .....	Thigh dislocated by a fall of slate.
16	Jasper Vanlipper, .....	Welsh, .....	Miner, .....	37	M.	Baumont, .....	Washington, ..	Leg broken by a fall of slate.
22	Christopher Lax, .....	American, .....	Driver, .....	18	S.	Catsburg, .....	Washington, ..	Injured by cars.
24	Joseph Kaps, .....	Slav, .....	Machine runner, .....	53	M.	Eclipse, Railroad, .....	Washington, ..	Back bruised by a fall of "horse back" roof.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
May	29 Howard Hemmington, ...	American, ...	Miner, ...	20	S.	Ivill, ...	Washington, ...	Finger caught between sprag and wheel.
	30 Eugene Sweeney, ...	Italian, ...	Miner, ...	28	S.	Ivill, ...	Washington, ...	Toes mashed by fall of slate.
	31 G. A. Slater, ...	Hungarian, ...	Machine runner, ...	21	S.	Ivill, ...	Washington, ...	Toe mashed by mining machine.
	32 Abraham Murry, ...	Italian, ...	Miner, ...	19	S.	Mongah, ...	Allegheny, ...	Injured by flying coal from a shot.
	9 John Wassell, ...	Austrian, ...	Miner, ...	30	M.	Gallatin, ...	Washington, ...	Back injured by a fall of slate.
	12 Philip Coulter, ...	Irish, ...	Miner, ...	36	M.	Black Diamond, ...	Washington, ...	Thigh injured by being caught between cars.
	14 A. V. Barland, ...	Scotch, ...	Mine foreman, ...	43	M.	Gallatin, ...	Allegheny, ...	Car severely injured by a bar while lifting a machine.
	15 Harry Altonchase, ...	English, ...	Roadman, ...	44	M.	Vesta No. 2, ...	Washington, ...	Foot injured; struck by a rail.
	16 David Crockett, ...	English, ...	Loader, ...	50	M.	Ella, ...	Allegheny, ...	Injured by coal from shot.
	17 George Vickers, ...	English, ...	Timberman, ...	58	M.	Baumont, ...	Washington, ...	Ankle broken by a fall of rock.
June	20 Thomas Woods, ...	English, ...	Miner, ...	36	S.	Vesta No. 2, ...	Washington, ...	Foot injured; struck by a post.
	22 John Grimes, ...	American, ...	Miner, ...	18	S.	Camden, ...	Allegheny, ...	Leg broken by a fall of slate.
	22 Joseph Crossland, ...	American, ...	Driver, ...	40	M.	Ella, ...	Allegheny, ...	Ribs fractured; caught between car and post.
	22 Richard McClay, ...	American, ...	Driver, ...	35	S.	Black Diamond, ...	Washington, ...	Breast injured; kicked by a mule.
	22 William Miller, ...	American, ...	Driver, ...	30	S.	Black Diamond, ...	Washington, ...	Hand cut; caught between car and rib.
	27 Thomas Spear, ...	American, ...	Driver, ...	30	S.	Shoenberger, ...	Washington, ...	Arm injured; caught between car and rib.
	3 Joseph Alton, ...	American, ...	Miner, ...	37	M.	Vesta No. 1, ...	Washington, ...	Back injured by a fall of coal and slate.
	3 Balser Miller, ...	American, ...	Driver, ...	31	M.	Somers No. 3, ...	Westmoreland, ...	Artery broken on thigh; kicked by a mule.
	3 John Cutler, ...	Slav, ...	Miner, ...	28	M.	Black Diamond, ...	Washington, ...	Leg broken; caught between car and pillar.
	4 Clark Chadfelter, ...	American, ...	Loader, ...	18	S.	Arnold No. 1, ...	Fayette, ...	Arm broken; caught between car and post.
	5 Powell Chomlene, ...	Italian, ...	Miner, ...	43	M.	Mongah, ...	Allegheny, ...	Leg broken; by a fall of coal.
	6 John Johnson, ...	Finn, ...	Loader, ...	20	M.	Knob, ...	Washington, ...	Foot injured by a fall of slate.
	7 Leontinek Gabriel, ...	Italian, ...	Miner, ...	20	S.	Little Squaw, ...	Washington, ...	Arm injured by powder from a shot.
	12 James Park, ...	Scotch, ...	Driver, ...	26	S.	Marine, ...	Payette, ...	Finger broken between car and rib.
	13 John A. Cooper, ...	American, ...	Miner, ...	37	M.	Gallatin, ...	Allegheny, ...	Back injured by fall of coal.
	14 Nicholas Lacro, ...	Italian, ...	Miner, ...	33	S.	Rostraver, ...	Westmoreland, ...	Injured by a fall of "chase back" roof.
	14 Andrew Finckburn, ...	American, ...	Driver, ...	27	M.	Belipse Railroad, ...	Washington, ...	Thigh injured by being caught between car and pillar.
	15 Saffie Conato, ...	Italian, ...	Miner, ...	41	S.	Little Squaw, ...	Washington, ...	Slight injury by fall of slate.
	17 John L. Gyl, ...	Welsh, ...	Miner, ...	28	S.	Marine, ...	Fayette, ...	Foot cut off by a fall of slate.

18	Gregory Kane,	Irish,	Roadsman,	43	M.	Arnold No. 1,	Fayette,	Left leg badly sprained by a fall at tunnel.
20	Paul Kramper,	Slav,	Miner,	45	M.	Little Roystone,	Fayette,	Slightly injured; struck by a post.
21	Joshua Wyeth,	American,	Carpenter,	42	S.	Hazel Kirk,	Washington,	Shoulder lacerated; struck by a cage.
28	Thomas Fox,	American,	Miner,	50	S.	Milleville,	Allegheny,	Ankle badly sprained by a fall of coal.
1	Michael Finnage,	Slav,	Miner,	36	S.	Hazel Kirk,	Washington,	Leg broken by fall of slate.
10	John Landers,	American,	Miner,	29	S.	Iron City,	Westmoreland,	Arm broken by cars.
13	James Rogers,	American,	Pumpman,	17	S.	Allegheny,	Allegheny,	Injured by being caught between cogs of gears.
15	Henry Fleming,	American,	Driver,	23	M.	Mongah,	Allegheny,	Right leg sprained by cars.
16	Stephen Plasko,	Hungarian,	Miner,	48	M.	Risher,	Allegheny,	Leg badly sprained by a fall of 'horse back' roof.
17	John Day,	English,	Miner,	39	S.	Star,	Washington,	Bruised by a fall of roof and clay.
20	Joseph Mezie,	Hungarian,	Miner,	53	M.	Mongah,	Allegheny,	Leg broken by a fall of slate.
29	William Louttit,	American,	Roadsman,	26	M.	Tvill,	Washington,	Finger cut; caught between rails.
21	John Barosh,	Slav,	Machine helper,	24	M.	Mongah,	Allegheny,	Foot injured by mining machine; neces- sitating amputation.
22	Andrew Varla,	Italian,	Miner,	23	S.	Coal Bluff,	Washington,	Thumb cut off between cars.
25	Frank Lee,	English,	Miner,	40	S.	Ryth,	Washington,	Knee joint fractured by fall of coal.
26	Jacob Kos,	German,	Miner,	45	M.	Ella,	Allegheny,	Body injured by fall of slate.
27	Edward Martin,	English,	Miner,	32	M.	Arnold No. 1,	Fayette,	Leg broken by fall of slate.
29	William Campbell,	Irish,	Loader,	32	M.	Marland,	Allegheny,	Injured by being struck by fall of slate.
3	Marshall Cowdell,	Slav,	Miner,	35	M.	Hillbush,	Fayette,	Slightly injured by fall of slate.
6	Joseph Barton,	English,	Miner,	25	S.	Star,	Washington,	Back injured by fall of slate.
10	George Benson,	Slav,	Loader,	22	S.	Ella,	Allegheny,	Foot broken by a fall of coal.
14	Robert Bailey,	American,	Loader,	21	S.	Cleveland,	Fayette,	Leg broken by a fall of slate.
14	Joseph Bernot,	Slav,	Miner,	40	S.	Clyde,	Washington,	Back sprained by a fall of coal.
21	Michael Stankio,	American,	Miner,	26	M.	Shoenberger,	Washington,	Injured by coal from a shot.
24	Willis Hodson,	Pole,	Driver,	27	M.	Clinton,	Allegheny,	Leg broken by a fall of slate.
25	Joseph Copolis,	American,	Loader,	20	M.	Gallatin,	Allegheny,	Internal injuries by cars.
29	James Rue,	American,	Boss driver,	30	M.	Gallatin,	Allegheny,	Injured by fall of slate.
29	David Smeier,	American,	Timberman,	40	M.	Gallatin,	Allegheny,	Leg broken; piece of rock rolled on him.
29	Thomas Holt,	Italian,	Loader,	18	S.	Postway,	Westmoreland,	Injured by fall of coal and fall of slate.
30	Nath Roberts,	American,	Miner,	38	M.	North West,	Westmoreland,	Hand and head by a fall of slate.
30	Orland Sever,	Slav,	Miner,	35	M.	Crom,	Washington,	Thigh and bruised by fall of coal.
30	John Krenns,	Slav,	Loader,	28	M.	Rastraver,	Westmoreland,	Thigh fractured by a fall of slate.
3	Robert Ammon,	American,	Motorman,	20	S.	Ella,	Allegheny,	Leg broken by a fall of coal.
3	Michael Andrio,	Pole,	Miner,	33	M.	Somers No. 2,	Westmoreland,	Injured; caught between motor and entry pillar.
4	Bernard Ebario,	Italian,	Loader,	63	M.	Eclipse Railroad,	Washington,	Injured by a fall of slate.
11	Joseph Ebario,	Slav,	Miner,	30	S.	Somers No. 3,	Westmoreland,	Leg broken by a fall of coal.
11	Archibald Merenior,	Italian,	Miner,	44	M.	Clinton,	Allegheny,	Injured by a fall of slate.
13	Windlefield Bush,	American,	Driver,	41	M.	Tremont,	Fayette,	Hands severely burned by powder.
17	Henry Penn,	American,	Miner,	24	M.	Mongah,	Allegheny,	Injured by a car by fall of slate.
18	Jacob Backus,	Slav,	Loader,	24	M.	Easton Creek,	Allegheny,	Injured by a fall of slate.
24	John McGowan,	Pole,	Miner,	14	S.	West No. 3,	Washington,	Injured by a fall of slate.
25	Peter Brogilde,	Pole,	Miner,	18	S.	Vespa No. 3,	Washington,	Foot injured by cars.
25	William Henry,	German,	Miner,	27	S.	Risher,	Allegheny,	Burned by powder.
30	Stona Label,	Slav,	Machine man,	25	S.	Ellsworth No. 2,	Washington,	Severely injured by fall of slate.
1	Adam Gabar,	Austrian,	Loader,	66	M.	Somers No. 2,	Westmoreland,	Finger cut off by fall of slate.
								Injured by fall of slate.

Aug.

Sept.

Oct.

July

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident. In Brief.
Oct.	Joseph Maxinskey.	Pole.	Leader.	35	M.	Ellis.	Westmoreland.	Severely burned by an explosion of fire damp.
14	Giovanni Dorizuzie.	Italian.	Leader.	35	M.	Cleveland.	Payette.	Leg broken by fall of slate.
15	John Smith.	Austrian.	Miner.	35	M.	Eclipse, Railroad.	Washington.	Leg broken by fall of slate.
24	John Powers.	American.	Wireman.	36	M.	Bertha.	Allegheny.	Leg broken by cars.
24	Grant Jackson.	American.	Driver.	31	M.	Nottingham.	Washington.	Injured by mining machine.
25	Michael Kutho.	Hungarian.	Miner.	43	M.	Somers No. 2.	Westmoreland.	Injured by fall of slate.
31	Aglio Bromdi.	Italian.	Miner.	32	M.	Milesville.	Allegheny.	Leg broken by a fall of slate.
31	John Lehanush.	Hungarian.	Gripper.	14	S.	Acme.	Washington.	Leg broken; caught by a fall of slate.
4	Elmer Snyder.	American.	Cager.	23	M.	Arnold No. 2.	Payette.	Injured; struck by a cage.
5	Paul Krumpner.	Slovak.	Miner.	46	M.	Little Redstone.	Payette.	Severely injured by a fall of coal.
8	Joseph Branch.	Polish.	Miner.	46	M.	Prescott.	Washington.	Injured by fall of coal.
12	Michael Krumpner.	American.	Driver.	25	S.	Cleveland.	Washington.	Injured between cars and timber.
13	James Russo.	Slovak.	Driver.	23	M.	Acme.	Washington.	Leg broken by fall of coal.
15	James A. Moore.	Irish.	Miner.	57	M.	Equitable.	Westmoreland.	Leg broken; caught between cars.
25	William Cain.	English.	Miner.	49	M.	Arnold No. 2.	Payette.	Foot injured by fall of slate.
27	William Haney.	American.	Brakeman.	21	M.	Mongah.	Allegheny.	Foot injured; caught between cars.
27	William Haney.	American.	Trapper.	13	M.	Nottingham.	Washington.	Head bruised by a runaway mine.
29	Angelo Doe.	Italian.	Miner.	18	S.	Catsburg.	Washington.	Severely injured by a fall of slate.
3	James N. Carroll.	American.	Driver.	18	S.	Somers No. 2.	Payette.	Injured by a fall of coal.
3	Joseph Wilson.	American.	Driver.	21	M.	Hilldale.	Washington.	Collar bone broken between car and room.
4	Edgar Stewart.	American.	Trip catcher.	21	M.	Arnold No. 1.	Payette.	Arm broken by falling on rail.
7	August Protta.	American.	Miner.	25	M.	Alladin.	Allegheny.	High injured by fall of slate.
9	Joseph Tracy.	American.	Driver.	22	M.	Prescott.	Allegheny.	Collar broken by cage.
10	Alexander Decker.	American.	Miner.	26	M.	Hilldale.	Washington.	Head injured by a fall of slate.
13	Galatore Nalafu.	Italian.	Miner.	36	M.	Had Kirk.	Washington.	Leg broken by a fall of slate.
17	James Hitchins.	English.	Leader.	26	M.	Knob.	Washington.	Leg injured by cars.
21	Peter Easterson.	Flm.	Miner.	35	S.	Mongah.	Allegheny.	Head cut by a fall of slate.
21	Abram Franks.	American.	Loader.	16	S.	Knob.	Washington.	Thigh broken by a fall of slate.
25	William Smith.	American.	Switchman.	23	S.	Lyell.	Washington.	Body injured from coming in contact with entry pillar.
30	Pelegra Pelegrini.	Italian.	Driver.	24	S.	Milesville.	Allegheny.	Leg broken by a fall of coal and slate.
30	Lawrence Murphy.	Irish.	Driver.	38	M.	Lyell.	Washington.	Leg broken; caught between cars.



# Second Bituminous District.

ALLEGHENY, INDIANA AND WESTMORELAND COUNTIES.

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Greensburg, Pa., March 20, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: I have the honor to herewith submit my report as Inspector of Mines for the Second Bituminous District for the year ending December 31, 1901, in compliance with section 2 of article 10 of the Bituminous mining act, approved the 15th day of May, 1893.

My report of 1900 showed that there were in the district 100 mines which produced 13,468,199 tons of coal. Four million two hundred and eighty thousand three hundred and fifty-four tons of coke were manufactured.

The State Board of Examiners at their session in Pittsburg in May last revised the districts, and created two additional ones, Nos. 11 and 12, making twelve in all.

In revising the boundary lines of the Second district, thirty-eight mines were taken from it and two others were added, as follows: Six of the mines taken were placed in the Third district, six in the Seventh, and twenty-six in the Eleventh. The two mines added were, one from the Third and one from the Sixth district. The Second district as rearranged contains sixty-two mines.

Seven new mines were opened—three of which produced no coal—and two small mines increased the number of persons employed in each, until they now come under the law, making nine additional mines. One mine, Maher No. 2, was worked out and abandoned, leaving seventy-two mines in the district at the end of the year, sixty-nine of which produced coal, including the abandoned mine.

The sixty-two mines which remained in the district after the rearrangement; produced 7,648,980 tons of coal and 1,377,133 of coke during the year 1900, while in 1901 the production, including the new mines, was 8,183,364 tons of coal and 1,498,520 of coke an increase of 534,384 tons of coal and 121,387 tons of coke.

The two mines added from the Third and Sixth districts produced 59,367 tons of coal, making the total production of coal for the year 8,222,731 tons.

There has also been an increase in the number of persons employed. In 1900 the number of persons employed in and about the sixty-two mines mentioned was 10,036. In 1901, it was 11,440, including those



employed in and about the new mines, an increase of 1,404. The two mines added from the Third and Sixth districts employed seventy-seven persons, making a total of 11,517 persons employed at the close of the year.

The total number of accidents reported as having occurred in the district was 111, of which twenty-nine were fatal.

The number of wives made widows by these fatalities was nineteen, and the number of children left orphans was forty-nine.

The decrease in the number of fatalities, as compared with that of 1900, was twelve.

The increase of non-fatal accidents was forty-five. Quite a number of these, as will be seen by Table 5, were not of a serious nature.

I am pleased to report that, with but few exceptions, the condition of the mines has been improved. This is true especially in regard to ventilation. Three furnaces and five fans have been put in operation, and four small fans have been replaced by larger ones, and all are now giving good results.

The report contains the usual tables and statistics, with a brief description of the mines, together with the most important improvements made; also a description of the fatal accidents and a report of the annual examination for mine foreman certificates, together with the names of applicants who have passed successful examinations and received certificates of competency for mine foreman, as shown by the records of the examining board, from the passage of the act of May 15, 1893, relating to Bituminous coal mines, up to and including the year 1901.

One violation of the mining law was reported to me during the year, upon the basis of which I made an information against one John Youchman, a roadman, for carrying matches, pipe and other smokers' articles into the Puritan or Baggaley mine of the American Coke Company, in which locked safety lamps were used, a statement of which is also made a part of this report.

All of which is respectfully submitted.

C. B. ROSS,  
Inspector.

#### Production of Coal in Tons During the Year 1901.

Westmoreland Coal Company, .....	1,347,410
Penn Gas Coal Company, .....	465,155
Greensburg Coal Company, .....	283,601
Jamison Coal and Coke Company, .....	381,580
Loyalhanna Coal and Coke Company, .....	344,568
Hostetter Connellsville Coke Company, .....	538,000
American Coke Company, .....	532,842
Atlantic Crushed Coke Company, .....	90,980
The Ligonier Coal Company, .....	24,947

Burrell Coal Company, .....	90,853
Maher Coal and Coke Company, .....	46,462
McCreary Coke Company, .....	136,239
Blairsville Coke Company, .....	33,323
Ocean Coal Company, .....	125,369
Claridge Gas Coal Company, .....	201,544
Manor Gas Coal Company, .....	263,148
Spring Hill Gas Coal Company, .....	116,000
W. B. Skelly, .....	20,773
Penn Manor Shaft Company, .....	60,533
Carbon Coal Company, .....	249,667
Sewickley Gas Coal Company, .....	169,007
Arona Gas Coal Company, .....	266,951
Madison Gas Coal Company, .....	191,475
Pittsburg and Baltimore Coal Company, .....	30,000
Hempfield Coal Company, .....	208,079
Alexandria Coal Company, .....	275,415
Donohoe Coal and Coke Company, .....	151,382
Salem Coal Company, .....	83,948
Huron Coal Company, .....	14,724
Latrobe Coal Company, .....	248,791
H. C. Frick Coke Company, .....	116,091
Saxman Coal and Coke Company, .....	49,843
Superior Coal and Coke Company, .....	130,180
Derry Coal and Coke Company, .....	260,962
Bessemer Coke Company, .....	135,113
Millwood Coal and Coke Company, .....	107,067
Reese Hammond Fire Brick Company, .....	18,687
Bolivar Coal and Coke Company, .....	6,650
James Kerr, .....	3,985
Elkins Gas Coal Company, .....	160,368
American Steel Hoop Company, .....	71,509
Ray Coal Company, .....	32,784
Robert Smith, .....	46,637
Graff Coal Company, .....	31,086
Dixon Brothers, .....	4,388
Glenmore Coal and Coke Company, .....	6,600
Indiana Coal and Coke Company, .....	4,845
Mitchell-Watson Coal and Coke Company, .....	.....
Bowman Coal Mining Company, .....	29,614
J. W. Smith Bros. & Co., .....	45
Seaboard Coal Company, .....	3,758
Johnstown Coal Company, .....	9,753

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Total, .....	8,222,731
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The Total Production was Made up as Follows.

Shipped by railroad to market, .....	5,911,818
Sold at the mines for local use, .....	114,697
Consumed to generate steam, .....	164,226
Manufactured into coke, .....	2,031,990
Total, .....	8,222,731

### Summary of Statistics, 1901.

Number of mines in the district, .....	73
Number of mines in operation during 1901, .....	69
Number of new mines opening up which produced no coal, .....	3
Number of tons of coal produced, .....	8,222,731
Number of tons shipped, .....	5,911,818
Number of tons used for steam at mines, .....	164,226
Number of tons sold to employes and others, .....	114,697
Number of tons used in manufacture of coke, .....	2,031,990
Number of tons produced by pick mining, .....	6,667,228
Number of tons produced by compressed air machines, .....	659,158
Number of tons produced by electrical machines, ...	896,345
Number of coke ovens, .....	4,190
Number of tons of coke produced, .....	1,498,520
Number of persons employed inside the mines, .....	8,934
Number of persons employed outside, .....	2,583
Number of horses and mules used in and about the mines, .....	961
Number of fatal accidents, .....	29
Number of tons of coal produced per fatal accident, ..	283,542.4
Number of non-fatal accidents, .....	82
Number of tons of coal produced per non-fatal accident, .....	100,277.2
Number of persons employed per fatal accident, ....	397.1
Number of persons employed per non-fatal accident, ..	140.4
Number of wives made widows by accidents, .....	19
Number of children orphaned by accidents, .....	49
Number of kegs of powder used, .....	5,330
Number of pounds of dynamite used, .....	13,840
Number of Cylindrical boilers in use, .....	62
Number of tubular boilers in use, .....	130
Number of steam locomotives, .....	13
Number of compressed air locomotives, .....	3

Number of electric motors, .....	9
Number of steam engines of all classes, .....	172
Number of pumps delivering water to surface, .....	77
Number of mining machines in use, .....	121
Number of electric dynamos, .....	17
Number of air compressors, .....	21
Number of new mines opened, .....	9
Number of old mines abandoned, .....	1

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Superior Coal and Coke Company, .....	170,150	1	135,113	.....	.....	.....	140	.....	929.8
Duoy Coal and Coke Company, .....	296,962	.....	.....	.....	.....	.....	257	.....	802.9
Presumpter Coke Company, .....	135,113	.....	.....	.....	.....	.....	259	.....	451.8
Milwood Coal and Coke Company, .....	197,067	1	197,067	.....	.....	.....	131	11.9	817.3
Reese, Hammond Fire Brick Company, .....	18,487	.....	11	.....	.....	.....	19	.....	983.5
Bedwin Coal and Coke Company, .....	6,670	.....	1	18,487	.....	.....	19	19	350
James Kerr, .....	3,987	.....	.....	.....	.....	.....	23	.....	172.2
Elkins Gas Coal Company, .....	100,368	.....	.....	.....	.....	.....	218	.....	735.6
American Steel Hoop Company, .....	71,559	.....	1	100,368	.....	.....	199	218	389.3
Rey Coal Company, .....	32,784	.....	.....	.....	.....	.....	31	.....	886
Robert Smith, .....	36,637	.....	.....	.....	.....	.....	90	.....	777.9
Gray Coal Company, .....	31,288	.....	.....	.....	.....	.....	25	30	171.5
Donn Brothers, .....	6,000	.....	.....	.....	.....	.....	12	.....	550
Hammond Coal and Coke Company, .....	4,895	.....	.....	.....	.....	.....	52	.....	93.1
Hammond Coal and Coke Company, .....	29,614	.....	.....	.....	.....	.....	60	.....	403.5
Mitchell-Watson Coal and Coke Company, .....	45	.....	.....	.....	.....	.....	9	.....	5
Rayman Coal Mining Company, .....	3,758	.....	.....	.....	.....	.....	14	.....	208.4
J. W. Smith Brothers & Company, .....	9,733	.....	.....	.....	.....	.....	17	.....	573.7
Seaboard Coal Company, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Johnstown Coal Company, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals and average, .....	8,222,731	29	283,542.4	82	160,277.2	.....	11,517	397—	713.9

\*In course of construction.

TABLE B—Classification of Accidents.

	Killed or fatally injured.	Injured.	Total.
By falls of coal, .....	3	9	12
By falls of slate, .....	11	29	41
By falls of coal and slate, .....	1	4	5
By falls of roof, .....	1	7	8
By cars, .....	12	21	33
By falling cage, .....	1	8	9
By machinery, general, .....	1	2	3
By miscellaneous causes, inside, .....	1	1	2
By miscellaneous causes, outside, .....		1	1
Total, .....	29	82	111

TABLE C—Occupations of Persons Killed and Injured.

	Killed or fatally injured.	Injured.	Total.
Miners, .....	15	60	75
Drivers, .....	3	5	8
Oilers, .....	1		1
Machine loaders, .....	3	10	13
Door boys, .....	1		1
Pumpers, .....	1		1
Boatmen, .....	2	1	3
Assistant mine boss, .....	1		1
Fire boss, .....	1		1
Cagers, .....		3	3
Tippelman, .....		2	2
Outside laborers, .....	1	1	2
Total, .....	29	82	111

TABLE D—Number Killed and Injured in Each Month.

	Killed or fatally in- jured.	Injured.	Total.
January, .....	3	4	7
February, .....	6	1	7
March, .....	3	6	8
April, .....	3	5	7
May, .....	1	13	14
June, .....	3	4	7
July, .....	3	2	5
August, .....	3	13	15
September, .....		12	12
October, .....	3	10	12
November, .....	2	3	5
December, .....	2	10	12
Total, .....	29	82	111

TABLE E—Nationalities of Persons Killed or Injured.

	Killed or fatally in- jured.	Injured.	Total.
Welsh, .....	1	1	2
English, .....	2	4	6
Scotch, .....	2		2
Irish, .....	2		2
Poles, .....	2	8	10
Slavs, .....	3	12	15
Austrians, .....	4	4	8
Americans, .....	5	21	26
Hungarians, .....	1	5	4
Italians, .....	5	22	27
Germans, .....	2	3	5
Russians, .....		3	3
Grinner, .....		1	1
Total, .....	29	82	111

TABLE G—Giving name of mine, kind of opening, method of ventilation, haulage, whether pick or machine mine, in the Second Bituminous District.

Names of Collieries.	Kind of Opening.	Method of Ventilation.	Haulage.	Pick or Machine.
Export.	Drift.	Fan.	Animals and rope.	Pick and machine.
Lanower.	Slope.	Fan.	Animals and rope.	Pick and machine.
Westmoreland.	Shaft.	Fan.	Animals.	Pick and machine.
Coal Run.	Drift.	Furnace.	Animals.	Pick.
No. 1 Penn Gas.	Shaft.	Fan.	Animals and rope.	Pick.
No. 2 Penn Gas.	Shaft.	Fan.	Compressed air locomotives, and animals.	Pick.
No. 5 Penn Gas.	Slope.	Fan.	Animals and rope.	Pick and machine.
Green-shoag No. 1.	Slope.	Fan.	Animals and rope.	Pick.
Green-shoag No. 2.	Slope.	Fan.	Animals and rope.	Pick.
Rafel-shall.	Drift.	Natural.	Animals.	Pick.
Janes No. 1.	Slope.	Fan.	Animals.	Pick.
Janes No. 2.	Slope.	Fan.	Animals and rope.	Pick and machine.
Janes No. 3.	Shaft.	Fan.	Animals and rope.	Pick and machine.
Janes No. 4.	Shaft.	Fan.	Animals.	Pick and machine.
Janes No. 5.	Shaft.	Fan.	Animals.	Pick and machine.
Levellanna No. 1.	Shaft.	Fan.	Animals.	Pick.
Levellanna No. 2.	Shaft.	Fan.	Animals and rope.	Pick.
Lan-dah.	Slope.	Fan.	Animals.	Pick.
Hoshtet.	Slope.	Fan.	Animals and electric motor.	Pick.
Whitney.	Slope.	Fan.	Animals and rope.	Pick.
Purit in or Baguabey.	Slope.	Fan.	Animals and rope.	Pick.
Leahy.	Drift.	Fan.	Animals and rope.	Pick.
Atlantic No. 1.	Drift.	Fan.	Animals and rope.	Pick.
Atlantic No. 2.	Slope.	Fan.	Animals.	Pick.
S. H. Smith.	Drift.	Natural.	Animals.	Pick.
Legation No. 1.	Drift.	Fan.	Animals and rope.	Pick.
Legation No. 2.	Drift.	Furnace.	Animals.	Pick.
Legation No. 3.	Drift.	Furnace.	Animals.	Pick.
Legation No. 4.	Drift.	Furnace.	Animals.	Pick.
Moher No. 1.	Drift.	Natural.	Animals.	Pick.
Moher No. 2.	Drift.	Fan.	Animals and rope.	Pick and machine.
Greenston No. 1.	Drift.	Furnace.	Animals.	Pick.
Greenston No. 2.	Drift.	Fan.	Animals.	Pick.
Griff No. 1.	Drift.	Fan.	Animals.	Pick and machine.
Griff No. 2.*	Drift.	Fan.	Animals.	Pick and machine.
Ocean No. 1.	Shaft.	Fan.	Animals and rope.	Pick.
Ocean No. 2.	Drift.	Fan.	Animals and rope.	Pick.
Charlotte.	Drift.	Fan.	Animals and steam locomotives.	Pick.
Denmore.	Slope.	Furnace.	Animals.	Pick.
Spring Hill.	Drift.	Furnace.	Animals.	Pick.
Elizabeth.	Drift.	Fan.	Animals.	Pick.
Penn Murd.	Shaft.	Fan.	Animals.	Pick.
Carbon.	Slope.	Fan.	air locomotive.	Pick.

Sewickley.	Slope.	.....	Fan.	.....	Animals and rope.	.....	Pick.
Arana.	Slope.	.....	Fan.	.....	Animals.	.....	Pick.
Marlston.	Drift.	.....	Furnace.	.....	Animals and rope.	.....	Pick.
Baltimore No. 1.	Slope.	.....	Fan.	.....	Animals and rope.	.....	Pick.
Montcalm.	Slope.	.....	Fan.	.....	Animals and rope.	.....	Pick.
Dea Antrim.	Drift.	.....	Fan.	.....	Animals and rope.	.....	Pick.
Dea Shaw.	Drift.	.....	Fan.	.....	Animals and electric motor.	.....	Pick.
Dea Hume.	Drift.	.....	Fan.	.....	Animals.	.....	Pick.
Huron.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Latrobe.	Slope.	.....	Fan.	.....	Animals and rope.	.....	Pick.
Monastery.	Slope.	.....	Fan.	.....	Animals.	.....	Pick.
M. Saxmum.	Slope.	.....	Fan.	.....	Animals.	.....	Pick.
Superior No. 1.	Shaft.	.....	Fan.	.....	Animals.	.....	Pick.
Deary shaft.	Shaft.	.....	Fan.	.....	Animals and electric motors.	.....	Pick.
Saint Clair.	Slope.	.....	Fan.	.....	Animals and rope.	.....	Pick.
M. Lawson.	Shaft.	.....	Fan.	.....	Animals.	.....	Pick.
Indiana.	Drift.	.....	Natural.	.....	Animals.	.....	Pick.
Lockhart.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Lincoln.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Pleasant Valley.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Schellin.	Drift.	.....	Fan.	.....	Animals and rope.	.....	Pick.
Ray.	Slope.	.....	Fan.	.....	Animals.	.....	Pick.
Rich.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Black.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Dixon.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Tearing Run.	Drift.	.....	Natural.	.....	Animals.	.....	Pick.
Mitchell.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Mitchell-Watson No. 1.	Drift.	.....	Natural.	.....	Animals.	.....	Pick.
Lawman.	Drift.	.....	Fan.	.....	Animals.	.....	Pick.
Edri.	Drift.	.....	Furnace.	.....	Animals.	.....	Pick.
Seaboard.	Drift.	.....	Exhaust steam.	.....	Animals.	.....	Pick.
Cramer.	Drift.	.....	Natural.	.....	Animals.	.....	Pick.

\*In course of construction.

THE UNIVERSITY OF CHICAGO



TABLE II.—Giving name of mine, seam of coal worked, thickness of coal seam in inches mined, number of tons of machine mined coal, and number of machines in use in each mine, total number of machines in use and power used for operating them.

Name of Mine.	Seam of Coal Worked.	Thickness of coal seam in inches mined.	Number of tons of machine mined coal.	Type and Number of Machines in Use.					Power Used.
				Sullivan.	Laffey.	Ingersoll.	Harrison.	Morgan-Gardner.	Goodman.
Export.	P. or Pittsburgh.	60	402,488	10					
Latimer.	P. or Pittsburgh.	48	22,576	6					
Westport and	P. or Pittsburgh.	72	22,800	9					
Wagon Nose 1 and 2.	P. or Pittsburgh.	60	67,206	6		6	8		
Wagon Nose 1.	P. or Pittsburgh.	72	86,256	4					
No. 1 Penn. Gas.	P. or Pittsburgh.	60	100,375	3					
No. 2 Penn. Gas.	P. or Pittsburgh.	60	73,896	4					
Betty.	P. or Pittsburgh.	72	17,000	2					
Bathurst.	P. or Pittsburgh.	72	62,000	28					
Gardner Nos. 1 and 2.	P. or Lower Freeport.	82	62,000	1					
Gardner No. 1.	P. or Pittsburgh.	78	15,000	1					
Langdon No. 1.	P. or Pittsburgh.	78	30,000	1					
Salem.	P. or Pittsburgh.	72	5,500	1					
Totals.			1,555,503	50	32	23	8	6	3
									121
Number of machines operated by compressed air.									
by electricity.									
Totals.									
94									
27									
121									



TABLE—Continued.

Name of Mine.	Name of Operator.	Number of fans.	Size of fans in feet.	Number of furnaces.	Size of furnaces in feet.	Cubic feet of air per minute in circulation.	Number of persons employed in mine.	Minute for each person employed.	Number of splits of the air current.	Cubic feet of air per minute in circulation in splits.
Graff No. 1.	Blairsville Coke Company.	2	(8x25) (7x15)			120,800	142	877.6		59,200
Ocean No. 1.	Ocean Coal Company.	1	7x15			104,800	200	527.0		55,780
Claridge.	Claridge Gas Coal Company.	1	5½x12			106,120	210	344.9		61,130
Denmark.	Maier Gas Coal Company.	1	5½x12							
Spring Hill.	Spring Hill Gas Coal Company.			2	(7x6) (5x5)	42,000	126	333.3	2	42,000
Elizabeth.	W. B. Stealy.			1		16,800	41	409.7	2	16,800
East Mount.	W. B. Stealy.			1		39,800	85	468.2	2	39,800
Carlton.	Carlton Coal Company.	1	6x20			108,120	212	321.3	5	40,800
Saville.	Saville Gas Coal Company.	1	5x11			64,400	227	283.7	5	90,260
Saville.	Saville Gas Coal Company.	1	8x35			64,400	211	305.2	6	42,040
Arden.	Arden Gas Coal Company.	1	6½x16			26,000	202	128.7	3	21,420
Madison.	Madison Gas Coal Company.	1	8x12	1	6x12	34,820	104	334.8	2	34,820
Pittsburg No. 1.	Pittsburg and Baltimore Coal Company.	1	3½x12			54,000	148	364.8		41,040
Hempfield.	Hempfield Coal Company.	1	(6½x16) (4 x 15)			101,500	285	357.1	8	64,480
Alexandria.	Alexandria Coal Co.	2	5x14 5x14			32,820	134	245.0	1	29,940
Donahoe.	Donahoe Coal and Coke Company.	1	5x14			19,000	69	275.4	1	12,000
Salem.	Salem Coal Company.	1	5x16	1		74,000	227	322.9	6	50,460
Lebanon.	Huron Coal Company.				3					
Lebanon.	Huron Coal Company.					36,000	97	381.4		36,000
Monastery.	Monastery Coal Company.	1	4x15			31,200	100	312	1	31,200
Saxman.	Saxman Coal and Coke Company.	1	3½x12			43,200	108	400	3	31,030
Saxman No. 1.	Saxman Coal and Coke Company.	1	2½x12			64,000	265	241.5	6	43,100
Denny shaft.	Denny Coal and Coke Company.	1	6x20			38,700	153	251.6	2	31,560
Saint Charles.	Bessemer Coal and Coke Company.	1	5½x18			56,100	107	521.2	2	47,220
Millwood.	Millwood Coal and Coke Company.	1	5x13½			16,200	17	952.9	1	16,200
Lockport.	Reese-Hammond Fire Brick Company.					10,080	14	720	1	10,080
Lockport.	Bolivar Coal and Coke Company.			1	7x8 6x8	15,000	23	652.1	1	15,000
Lockport.	James Kerr.			1						
Pleasant Valley.	Elkins Gas Coal Company.	1	7x12	2	(7½x12) (6x10)	61,200	202	302.4	6	49,970
Isabella.	American Steel Hoop Company.					55,000	112	491.1	2	14,240
Ray.	Ray Coal Company.					12,500	33	378.7	1	12,500



### Examination of Applicants for Certificates of Competency as Mine Foreman.

The annual examination of applicants for certificates of competency as mine foreman was held in Fisher's Hall, Greensburg, January 2d, 3d and 4th, 1901.

The board of examiners was composed of C. B. Ross, Inspector; R. O. Thomas, superintendent, and William Severn, mine foreman.

Twenty-eight applicants appeared and were examined, and the following ten, having passed a satisfactory examination, received certificates.

#### First Grade.

David Condie, Cokeville, Westmoreland county.  
William Bird, Herminie, Westmoreland county.  
James J. Brown, Whitney, Westmoreland county.  
Edward Brennen, Export, Westmoreland county.  
Jacob Wewalt, Scottdale, Westmoreland county.  
Joseph Angus, Mt. Pleasant, Westmoreland county.  
William McKusker, Mt. Pleasant, Westmoreland county.

#### Second Grade.

William D. Roberts, Blairsville, Indiana county.  
John McClane, Whitney, Westmoreland county.  
M. J. Patterson, Latrobe, Westmoreland county.

#### Names of Applicants.

Who have passed a successful examination and received certificates of competency as mine foreman, as shown by the records of the examining boards, from the passage of the act of May 15, 1893, relating to Bituminous coal mines, up to and including the year 1901.

#### First Grade.

James Eaton, James Henderson, John Higson, John Keck, William Hammer, Charles Severn, John Snedden, H. J. Simmons, William Meir, Peter Lowther, Morris Ramsey, John McDonald, James Duncan, George H. Blackburn, H. D. Penman, Thomas Easton, Edward E. Girard, James Charlesworth, William McKusker, John Patterson, James W. Eaton, Jasper Wilson, C. W. Hall, George Eustis, Thomas B. Brown, James McGuire, Daniel S. Miller, Edward R. Jones, George E. Loughner, A. J. McNally, Edward Franklin, David Condie, William Bird, James J. Brown, Edward Brennen, Jacob Dewalt, Joseph Angus.



## Second Grade.

James Duncan, John F. Bell, Thomas Webber, Andrew Fulton, William D. Roberts, M. J. Patterson, James McKechnan, David Condie, John McClane.

Commonwealth

vs.

John Youchman.

In the Court of Quarter Sessions of Westmoreland County, Pa.

No. 102 Aug. Sessions, 1901.

Charge—Violating mining laws. C. R. Ross, Inspector, prosecutor.

Information was made by me against John Youchman based upon the following facts, as recited in the information: That on the 14th day of June, 1901, the said John Youchman intentionally and carelessly took matches, pipe, tobacco and other smokers' articles in the coal mines of the American Coke Company, located at Baggageley Postoffice, Unity township, Westmoreland county, Pa., and carried the same beyond the station inside of said mine, inside of which locked safety lamps are used, whereby the lives, health and security of the miners in said mine were endangered, contrary to the acts of Assembly in such cases made and provided.

Information made upon facts received from Charles E. Porter, mine foreman.

A hearing was had before Jacob Hoffer, J. P., in the borough of Greensburg, and the defendant bound over to court. At the subsequent term of the quarter sessions court at No. 102 August Term, a bill of indictment was preferred, and August 28, 1901, a true bill was found against the defendant.

The case came on to be heard and on the 29th August, 1901, the jury returned a verdict that they find the defendant guilty and recommend him to the extreme mercy of the court.

Charles M. Henry, Foreman.

Motion for a new trial and in arrest of judgment was filed by the attorneys for the defendant, setting forth in substance two reasons: 1st. That the act of May 15, 1893, P. L. 52, was unconstitutional. 2d That the indictment was defective. Both of which reasons were overruled by the court, who said, inter alia: "The precise question is ruled in the case of the Commonwealth vs. Jones, 4 Pa. Superior Court, 362, in which it is held that the title of the act of May 15, 1893, P. L. 52 (the act under which this bill is drawn) meets all the constitutional demands as to sufficiency. The objections to its sufficiency are without foundation, etc."

After the court had overruled the motion for a new trial and in arrest of judgment, the defendant was called in for sentence, and di-

rected on the 26th November, 1901, to pay the costs of prosecution, pay a fine of twenty-five dollars to the Commonwealth for use of the county and stand committed until sentence was complied with.

#### Descriptions of Fatal Accidents that Occurred During the Year.

William Stevenson was so seriously injured January 9, in Atlantic No. 2 mine, by being caught between a car and coal pillar, that death resulted in about one-half hour. The accident occurred on No. 1 "butt" entry of No. 1 face entry left.

Stevenson was employed as a driver and had brought a wagon from No. 10 room, which jumped the track going down the entry. He called some miners to put in on the track; they came and while they were engaged in so doing, Stevenson took his mule and went to No. 15 room for another wagon. On reaching the entry with this wagon it suddenly increased in speed. He applied the brake but it did not check the speed of the wagon. Knowing that the other wagon was off the track farther down the entry and thinking that a collision would certainly occur, in which his mule would be injured and possibly killed, he attempted to pass the car to unhook his mule for the purpose of turning it off into a room and saving it from injury. But just as he was passing the wagon it jumped the track and he was caught between it and the coal pillar, with the above result.

John Yapsick was so seriously injured January 9, in Penn-Manor mine, by a fall of coal that death resulted in six hours. Yapsick was mining out a small stump of coal, which had been left in the mining to act as a sprag, when the coal fell and crushed him.

Peter Kilday was instantly killed, January 14, by having been struck by a trip of loaded mine cars on the main haulage road, in the Sewickley mine. Kilday in company with two other roadmen, were returning to their work by way of the haulage road. On reaching a point about two hundred yards inside of the mine mouth they met the trip. Smith stepped off to the right side, Shotts jumped into a shelter hole on the left and Kilday attempted to follow Shotts but was not quick enough and was struck by the trip and dragged about one hundred yards before it could be stopped. He was found under the fourth wagon.

Villani Guisepppe was instantly killed on February 4, in the Millwood mine. A driver, started his mule into Guisepppe's room and called to him to hook the mule to the car and start it out. This he did while the driver was arranging his trip on the entry. On hearing the mule and wagon coming he went to the mouth of the room to take charge of it and was surprised to find that Guisepppe had been run over. He had evidently been on the front end of the wagon, and it was supposed that his head struck the roof, which caused him to fall off in front of the wagon and it passed over him.

Patrick Hughes was instantly killed on February 18, in the Larimer mine, by a fall of slate. He was preparing to set a post under the slate, when it fell and crushed him.

Joseph Loughery was instantly killed on February 19, in the Alexandria mine. It is customary in this mine for the miners to run their loaded cars from face of rooms to the mouth near the entry, where the drivers got them. In this case Loughery had run his wagon down and it ran out too far to allow the trip to pass. He was at front end of wagon pushing to back and it is supposed that he thought he had it back far enough. He started back into his room and just as he was passing between the wagon and coal pillar a driver came along with his trip, which struck the corner of Loughery's wagon, throwing it from the track and crushing Loughery against the coal pillar.

Mathias Ansity and Joseph Epovich were instantly killed February 26, by a fall of slate, while at work in No. 3 entry in the Dorothy mine. The accident occurred on the night turn, shortly after they had loaded their first car. They were new men at this mine, having just commenced work on the night turn.

George Uhas was so seriously injured February 27, by being caught between a trip of loaded mine cars and coal pillar, in the Westmoreland shaft mine, that death resulted the following day. Uhas was on his way out of the mine and had kept the traveling way until he reached No. 41 entry. Here he left the traveling way and proceeded to travel on the main haulage road, which is against the rules of this mine. He had gone only a short distance when he was overtaken by a trip of loaded cars, with the result as above stated. A violation of the rules of the mine on his part cost him his life.

George Lindsay was instantly killed on the morning of March 15, about six o'clock, by a fall of "horseback" slate in the Jamison No. 1 mine. The accident occurred at the face of No. 5 face entry right, where Lindsay was at work.

Joseph Georsa was instantly killed on March 16, by a fall of slate in room No. 15 off No. 12 entry west in the Larimer mine.

Andrew Collissa, a door boy in Graceton No. 2 mine, was instantly killed April 2, by being struck by a runaway trip of mine cars.

John Heckman was fatally injured April 19, while at work in the Monastery mine, by a fall of slate; death resulted in five hours. The accident occurred in pillar workings, where he was drawing timber.

George Collissa was injured May 31, by a fall of slate at face of entry in Graceton No. 2 mine. He was operating a mining machine at the time. The injury proved fatal June 15.

Frank Chicone was instantly killed June 1, by a fall of coal at face of room in the Donohue mine. He was undermining the coal at the

time and a failure on his part to sprag it as required by the mining law, was the cause of the accident.

George Weightman was instantly killed June 3, by being run over by a trip of mine cars in the Claridge mine.

Tim Hoolihan was fatally injured June 24, by being struck by a trip of loaded mine cars. The accident occurred in the Larimer mine on main haulage road. Death resulted while he was being taken out of the mine.

John Hudis was instantly killed July 1, while at work in Monastery mine, by a fall of slate at foot of slope.

Gottfried Eichner was seriously injured July 3, by a fall of roof, while at work in the Latrobe mine; death resulted on the 24th inst.

Samuel Smith an outside laborer, was instantly killed July 19, by being caught in the ventilating fan at the Baltimore No. 1 mine.

Antonia Serretto was instantly killed August 7, by a fall of coal. The accident occurred at face of No. 55 entry in the Westmoreland shaft mine.

William S. Hall was instantly killed August 7, by being struck by a trip of loaded mine cars. The accident occurred in the Monastery mine on the main haulage road.

M. C. O'Brien a fire boss in the Whitney mine, was so seriously injured August 24, by a fall of slate, that death resulted five hours after. He was making an examination of the slate, when it fell and crushed him.

Glen Woods was so seriously injured October 7, by being run over by a trip of mine cars that death resulted when he was being taken home. This accident occurred in Export mine on the main haulage road.

Alfred Guilim was instantly killed October 11, in Spring Hill mine, by a fall of slate at face of room in which he was working.

Joseph Lashko was so seriously injured November 25, by being caught between a wagon and coal pillar that death resulted some three days after. This accident occurred in the Whitney mine.

Mike Kranyak was so seriously injured November 26, while at work on the main haulage road in the St. Clair mine, by being run over by a trip of loaded mine cars, that death resulted on the following day.

John Mohar a driver in the Larimer mine, was so seriously injured December 11, by being kicked by a mule that death resulted some two days after.

Antonia Cacini was instantly killed December 27, by a fall of slate in the Pandora mine. Cacini had just fired a shot and was returning to fire another when the slate fell and crushed him.



## Description of Mines and Mine Improvements.

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Mines on and Near the Pittsburg Division of the Pennsylvania Railroad.

Spring Hill.—The general condition and ventilation has been fairly good during the year.

Larimer.—This mine was in good condition on each visit. On my last visit I measured 160,800 cubic feet of air per minute passing in at the inlet, which was well distributed around the workings.

Penn Gas Coal Run.—Ventilation and drainage in fair condition.

Penn Gas No. 1.—Was idle from April 25, to August 19, owing to the mine having been flooded by water, which entered through surface breaks during heavy rains. The general condition was favorable when visited.

Westmoreland Shaft.—Was in good condition on each visit, both as to ventilation and drainage. On my last visit I measured 169,120 cubic feet of air per minute passing out at the outlet.

Penn Gas No. 5.—This mine was in good condition on each visit, with plenty of air in circulation throughout the workings.

Radebaugh.—Was in favorable condition on each visit, except that the ventilation was not of the best.

Hempfield.—General condition, fair but on my last two visit the ventilating current was rather weak in parts of the workings.

Monastery.—The condition of this mine was satisfactory.

Latrobe.—The ventilation has been considerably improved during the year. Good volumes of air were measured near face of workings on my last visit.

Saxman.—Was found in good condition on each visit. Twenty new coke ovens were erected during the year.

Loyalhanna Nos. 1 and 2.—The ventilating current at the face of a part of the workings was rather weak at the time of my first two visits. I found it considerably improved on my last visit, December 14.

A new ventilating fan of the Brazil type, eighteen feet in diameter, was installed at the No. 2 mine.

Pandora.—The condition of this mine was fairly good on each visit, except the last, when I found the ventilating current rather weak at the face of part of the workings.

Superior No. 1.—Was in good condition, both as to ventilation and drainage.

Derry Shaft.—In reasonably good condition on each visit, except that the ventilation in a portion of the workings, was unsatisfactory.

Atlantic No. 1.—Operations are still confined to the extraction of pillars and entry stumps. Its condition was fairly good, consider-



ing the difficulties encountered in such work.

Atlantic No. 2.—Was in good condition as to ventilation and drainage on each visit. Good currents of air were measured at face of workings.

Saint Clair.—Condition favorable. The ventilating furnace, which for years had produced the ventilation for this mine, has been abandoned and a new fan of the Brazil type, eighteen feet in diameter, installed, which has improved the ventilation. A new opening has been made, which gives a more direct route for haulage. This improvement, and a new tippie which has been erected, greatly facilitates the handling of coal.

Ligonier No. 2.—Idle the entire year.

Millwood.—The general condition has been fairly good during the year.

Lockport.—Was in favorable condition at each visit.

#### Mines on and near the Turtle Creek Branch of the Pennsylvania Railroad.

Export.—Is a large mine, the underground workings of which are very extensive. The general condition of the mine was found to be good. A new fan of the Guibal type, twenty-four feet in diameter and eight feet wide, was installed during the year, which has greatly improved the ventilation.

Elizabeth.—On my first two visits I found the ventilation defective, as it was being produced by natural means. At my last visit I found it improved by the erection of a temporary furnace which was intended to answer the purpose until a permanent one could be erected.

Pleasant Valley.—The general condition has been good during the year.

Penn Gas No. 2.—Located on the Youghiogheny branch of the Pennsylvania Railroad. The workings are very extensive. The new dip workings, which are principally entry work, give off considerable explosive gas and are worked with locked safety lamps. The coal is brought down by blasting and great care must be exercised in order to prevent its taking fire. Oftentimes the flame from a shot ignites the gas escaping from and through the coal. These fires are extinguished by the persons who fire the shots and who are employed specially for that purpose. The drainage was good and the ventilation has been improved by the erection of a new ventilating fan of the Capell type; the diameter of the fan is sixteen feet, width six feet, with double inlet, and is so constructed that the air current can be reversed at any time it is desired.

Mines on and Near the Manor Branch of the Pennsylvania Railroad.

Claridge.—In fairly good condition on each visit during the year.

Denmark.—In fair condition, both as to ventilation and drainage.

Penn Manor.—The general condition of this mine was fairly good.

Greensburg No. 1.—Located on South West Branch of the Pennsylvania Railroad near Huff Station. The ventilation was good, drainage fair.

Mines on and Near the Hempfield Branch of the South West Pennsylvania Railroad.

Seaboard.—Is a new shaft opening to the Pittsburg seam.

Greensburg No. 2.—Was in fairly good condition on each visit. The mine had been ventilated by a Murphy fan six feet in diameter. This, however, has been replaced by one of the Guibal type, by which the ventilation has been considerably improved.

Carbon.—Was in good condition, except that the ventilation, on my last visit was rather weak at the face of part of the workings.

Arona.—In fair condition. A new ventilating fan of the Guibal type, is being installed.

Sewickley.—Its condition has been fairly good. The ventilation has been improved by the installation of a new ventilating fan of the Guibal type.

Madison.—Was in good condition on each visit.

Baltimore No. 1.—In good condition on each visit.

Ocean Nos. 1 and 2.—Was in good condition on each visit. Smoke was discovered coming up the No. 1 shaft, Sunday afternoon, August 25. An examination was made by the mine officials, and fire was discovered in No. 30 entry off lower north main entries. A shot had been fired the day previous about 2 o'clock P. M., in this entry and the usual examination was made to see whether or not any gas feeders were burning, but none were seen. It seems, however, that a small feeder was burning under the coal unnoticed, as the fire started at the face of the entry. The officials at once commenced to fight the fire, but it had gained considerable headway and could not be checked. They kept up the battle during the night but in the morning they were compelled to retreat as the fire, was traveling at a rapid rate down the north main entrance.

I arrived at the mine on August 26, about noon, and consultation was held with the mine officials and it was decided to seal up the shafts and flood the burning section of the mine. This was done successfully, for the reason that this section of the mine lay to the dip. A drill hole to the surface, through which water had been pumped

from the mine, was used to carry the water from the surface. It was connected by pipes to the pumps placed at a creek on the surface near the drill hole. The water thus conducted to the mine, in connection with water which accumulated there, soon extinguished the fire, and operations in other parts of the mine were resumed September 14.

I visited the mine October 28, and found that the water had been pumped out, and that no fire could be found. The roof of the entries for a considerable distance, where the fire had traveled, had fallen, and the sides of the coal pillars in many places were coked to the depth of from three to six inches. The work of cleaning up these entries had already been begun and was progressing rapidly. The general condition of the mine was good at the time of my other visits.

#### Mines on and Near the Alexandria Branch of the Pennsylvania Railroad.

Jamison Nos. 1 and 2.—Were in fairly good condition throughout the year. Explosive gas was discovered in No. 2 mine, December 16.

Jamison No. 3.—Was in favorable condition on each visit.

Jamison No. 4.—Is a new shaft just being opened to the Pittsburg seam.

Alexandria.—Was in fairly good condition. A new air and pumping shaft has been sunk to a depth of 150 feet and an additional ventilating fan of the Guibal type, has been installed. This has greatly improved the ventilation in the lower or dip workings.

Donohoe.—Was in good condition generally. An electric haulage of the combined third and Traction rail systems was installed, and is giving satisfaction.

Salem.—The general condition of this mine has been fairly good. The ventilation has been improved by the erection of a ventilating fan of the Stein type.

Huron.—Is a new drift opening in the Pittsburg seam, and when visited was in a favorable condition. A tippie of the latest improved type has been erected.

#### Mines on and Near the Unity Branch of the Pennsylvania Railroad.

Dorethy.—A disastrous fire occurred in this mine, Sunday, April 28, which resulted in the destruction of the shaft timbers, head frame, coal bins, engine and boiler houses, and the loss of twenty-three head of stock which were in the mine at the time.

The fire originated in the pump house, located about twenty feet away from the shaft bottom. Careful inquiry failed to reveal the cause of the fire. The mine was worked with open lights and there is no doubt that it was caused by one of them.

The mine had been working day and night, and the sump which was located under the cages had become filled to such an extent that it was found necessary to clean it.

A. J. McNally, the mine foreman, was in the mine and had charge of the work.

About 11 o'clock A. M., Mr. McNally, the mine foreman, and P. J. McNally, the day pumper, went to dinner, leaving the other men in the mine. They had not been out more than a half hour when—McNally heard the whistle blow. This attracted his attention and he immediately returned to the shaft and found smoke issuing therefrom. He at once descended the shaft and with the assistance of the others began the battle with the flames, which soon spread to the stables. The water supply was somewhat limited and they were unable to overcome the flames and were compelled to retreat by way of the air shaft. The flames at once ascended the shaft, setting fire to the head frame and coal bins, and spread to the engine and boiler houses. Every effort was made to save the buildings but the water supply was not sufficient.

About 3.30 P. M., the head frame and coal bins, containing about thirty tons of coal, fell, a mass of ruins. A considerable portion of the coal went down the shaft, which increased the flames below.

The air shaft was closed up in order to save it and cut off the air from the fire. On the following day, a consultation was held by the officials and it was decided to flood the mine, and as soon as the debris around the burning shaft was removed it was sealed up. Three boilers and six pumps were placed at the Loyallhanna Creek, which is about sixteen hundred feet away from the shafts, two steam lines were laid from the boilers near the shaft to the pumps at the creek, and as the three boilers would not make sufficient steam to operate all the pumps, a six and a ten inch pipe line were laid to each shaft and the pumps commenced pumping water into the mine. It required only four days to do this work. On May 3, the pumps were stopped and the burning shaft, having been considerably cooled off, was opened. The ventilating fan was started and a party descended the air shaft and commenced to fight the fire. This was kept up during the night and a part of the following day. At one time it was thought the attempt would be successful, but owing to the entries near the shaft caving in, which cut off the air current and allowed the smoke from the fire to spread in the direction of the air shaft, those engaged in fighting the fire were compelled to retreat, and the shafts were again sealed up and the pumps started. Again on May 9, the shafts were opened, the pumps stopped, and another attempt was made to fight the fire, but without success.

The shafts were again closed, the pumps put in operation and kept running until the water raised in the shaft about forty feet. This



required about six weeks. The water was allowed to stand a short time in the shaft, after which a temporary head frame, which had been erected, was put in use and pumps lowered down the shaft and work was commenced to remove the water from the mine, which required about sixty days.

It was found necessary to retimber the shaft the entire depth. The excessive heat from the fire caused the entries to cave in for some distance from the shaft bottom, and in many places the sides of the coal pillars were coked to a depth of eighteen inches.

These entries have been cleared up and secured by timber and masonry where necessary. On the side of the shaft where the loaded wagons are handled, a solid arch of masonry, 340 feet long and fourteen feet high, has been built, and on the side where the empty wagons are handled, one 100 feet long and fourteen feet high has been built.

The mine resumed operations about the middle of September, and locked safety lamps have been used since the fire.

The officials deserve great credit for the manner in which the work was performed, from the fact that not a single accident occurred.

The mine was found in good condition throughout when visited.

Puritan.—Has been in good condition, both in regard to ventilation and drainage.

Hostetter and Whitney.—Were in good condition, both as to ventilation and drainage.

S. H. Smith.—Located on the Ligonier Valley Railroad, near Latrobe, has been in favorable condition. This mine is being rapidly exhausted.

#### Mines on and Near the Indiana Branch of the Western Pennsylvania Division of the Pennsylvania Railroad.

Isabella.—Was in fairly good condition.

Burrell Nos. 1 and 2.—Was in good condition.

Graff.—The condition of this mine was favorable on each visit.

Maher No. 2.—Worked out and abandoned April 19.

Maher No. 3.—The condition of this mine has been fairly good.

Smith.—Was in favorable condition on each visit. The coal near the ventilating furnace was discovered to be on fire October 22. Prompt action soon extinguished it.

Dixon.—Is a new drift opening in the Pittsburg seam and was in favorable condition when visited.

Blacklick.—Was in favorable condition. The ventilation has been improved by the erection of a ventilating furnace.

Mitchell. The condition of this mine has been reasonably good on each visit.



Graceton Nos. 1 and 2.—Was in fairly good condition on each visit, both in regard to ventilation and drainage.

Tearing Run.—Is a drift opening into the Lower Freeport seam and has been in operation several years, but did not employ a sufficient number of persons to come under the law, until the present year. It was in favorable condition when visited.

Mines on and Near the Bolivar Branch of the Pennsylvania Railroad.

Ray.—The general condition of this mine was favorable during the year.

Graff No. 2.—Is a drift into the Upper Freeport seam, just being opened.

Indiana.—Was in reasonably good condition during the year.

Lincoln.—This is a drift opening in the Lower Freeport seam and has been in operation several years, but did not employ a sufficient number of persons inside to come under the law until the present year. It was in favorable condition on each visit.

Cramer.—Was in favorable condition on each visit.

Mines on and Near the Western Pennsylvania Division of the Pennsylvania Railroad.

Mitchell-Watson No. 1.—Is a new drift opening into the Upper Freeport seam and is incomplete.

Bowman.—Was in favorable condition when visited.

Edri.—Is a new drift opening into the Pittsburg seam and is unfinished.

TABLE 1—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Second Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Westmoreland Coal Co.	Westmoreland.	Walter Leisenring.	Irwin.	T. D. Parfitt.	Export.	Pennsylvania Railroad.
Export.	Westmoreland.	Walter Leisenring.	Irwin.	Leonard Cokerick.	Irwin.	Pennsylvania Railroad.
Westmoreland shaft.	Westmoreland.	Walter Leisenring.	Irwin.	J. C. Fisher.	Irwin.	Pennsylvania Railroad.
Penn Gas Coal Co.	Westmoreland.			T. Frank Wolf.	Irwin.	Pennsylvania Railroad.
Coal Run.	Westmoreland.			T. Frank Wolf.	Irwin.	Pennsylvania Railroad.
No. 1 Penn Gas.	Westmoreland.			T. Frank Wolf.	Irwin.	Pennsylvania Railroad.
No. 2 Penn Gas.	Westmoreland.			T. Frank Wolf.	Irwin.	Pennsylvania Railroad.
No. 5 Penn Gas.	Westmoreland.			T. Frank Wolf.	Irwin.	Pennsylvania Railroad.
Greensburg Coal Co.	Westmoreland.	A. D. Harman.	Greensburg.	Henry Welty.	Greensburg.	S. W. P. R. R.
Greensburg No. 1.	Westmoreland.	A. D. Harman.	Greensburg.	Harry Null.	Greensburg.	S. W. P. R. R.
Greensburg No. 2.	Westmoreland.	A. D. Harman.	Greensburg.	A. D. Harman.	Greensburg.	Pennsylvania Railroad.
Radebaugh.	Westmoreland.					
Jamison Coal and Coke Co.	Westmoreland.	T. S. Jamison.	Greensburg.	R. H. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 1.	Westmoreland.	T. S. Jamison.	Greensburg.	R. H. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 2.	Westmoreland.	T. S. Jamison.	Greensburg.	R. H. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 3.	Westmoreland.	T. S. Jamison.	Greensburg.	Thos. S. Jamison.	Greensburg.	Pennsylvania Railroad.
Jamison No. 4.	Westmoreland.	T. S. Jamison.	Greensburg.	Thos. S. Jamison.	Greensburg.	Pennsylvania Railroad.
Levathanna Coal & Coke Co.	Westmoreland.	C. C. Watt.	1301 L. T. Bldg., Phila.	Wm. Leckie.	Loyathanna.	Pennsylvania Railroad.
Levathanna No. 1.	Westmoreland.	C. C. Watt.	1301 L. T. Bldg., Phila.	Wm. Leckie.	Loyathanna.	Pennsylvania Railroad.
Levathanna No. 2.	Westmoreland.	C. C. Watt.	1301 L. T. Bldg., Phila.	Wm. Leckie.	Loyathanna.	Pennsylvania Railroad.
Pandora.	Westmoreland.					
Hostetter-Connellsville Coke Co.	Westmoreland.	J. R. Marshall.	Whitney.	J. R. Marshall.	Whitney.	Pennsylvania Railroad.
Hostetter.	Westmoreland.	J. R. Marshall.	Whitney.	J. R. Marshall.	Whitney.	Pennsylvania Railroad.
Whitney.	Westmoreland.					
American Coke Co.	Westmoreland.	O. W. Kennedy.	Scottdale.	James Lurnby.	Hoggsley.	Pennsylvania Railroad.
Puritan or Buegaley.	Westmoreland.	O. W. Kennedy.	Scottdale.	A. F. Downing.	Latrobe.	Pennsylvania Railroad.
Lerdeth.	Westmoreland.					
Atlantic Crushed Coke Co.	Westmoreland.			H. C. Burket.	Greensburg.	Pennsylvania Railroad.
Atlantic No. 1.	Westmoreland.					
Atlantic No. 2.	Westmoreland.					

The Ligonier Coal Co. S. H. Smith, Ligonier No. 2,	Westmoreland, Westmoreland,	John McFadyen,	Latrobe,	Daniel Craig,	Latrobe,	Ligonier Valley R. R.
Barrell Coal Co. Barrell No. 1, Barrell No. 2,	Indiana, Indiana,			Thomas Maher, Thomas Maher,	Blairsville, Blairsville,	Pennsylvania Railroad, Pennsylvania Railroad.
Maher Coal and Coke Co. Maher No. 2, Maher No. 3,	Indiana, Westmoreland,			Thomas Maher, Thomas Maher,	Blairsville, Blairsville,	Pennsylvania Railroad, Pennsylvania Railroad.
McCreary Coke Co. Gracetown No. 1, Gracetown No. 2,	Indiana, Indiana,			Everhart Bierer, Everhart Bierer,	Gracetown, Gracetown,	Pennsylvania Railroad, Pennsylvania Railroad.
Blairsville Coke Co. Graft No. 2,	Indiana, Indiana,			W. P. Graft, W. P. Graft,	Blairsville, Blairsville,	Pennsylvania Railroad, Pennsylvania Railroad.
Ocean Coal Co. Ocean No. 1, Ocean No. 2,	Westmoreland, Westmoreland,	Thomas Fisher, Thomas Fisher,	Philadelphia, Philadelphia,	F. I. Kimball, F. I. Kimball,	Hermine, Hermine,	S. W. P. R. R. S. W. P. R. R.
Claridge Gas Coal Co. Claridge,	Westmoreland,	J. Howard Patton,	Greensburg,			Pennsylvania Railroad.
Manor Gas Coal Co. Denmark,	Westmoreland,	A. P. Cameron,	Claridge,	A. P. Cameron,	Claridge,	Pennsylvania Railroad.
Spring Hill Gas Coal Co. Spring Hill, Elizabeth,	Allegheny, Westmoreland,	W. W. Dempster, W. W. Dempster,	213 6th ave., Pittsburg,	W. W. Dempster, W. B. Skelly,	213 6th av., Export,	Pennsylvania Railroad, Pennsylvania Railroad.
Penn Manor Shaft Co. Penn Manor, Carbon Coal Co.	Westmoreland, Westmoreland,	Jno. H. Friend, A. D. Harman,	Pittsburg, Greensburg,	Samuel Ferguson, J. D. Wentling,	Harrison City, Greensburg,	Pennsylvania Railroad, S. W. P. R. R.
Sewickley Gas Coal Co. Sewickley,	Westmoreland,	H. F. Bovard,	Greensburg,	H. F. Bovard,	Darragh,	S. W. P. R. R.
Arona Gas Coal Co.	Westmoreland,	H. F. Bovard,	Greensburg,	H. F. Bovard,	Darragh,	S. W. P. R. R.
Madison Gas Coal Co. Madison,	Westmoreland,	H. F. Bovard,	Greensburg,	H. F. Bovard,	Darragh,	S. W. P. R. R.
Pittsburg and Baltimore Coal Co. Baltimore No. 1,	Westmoreland,	E. M. Steck,	Park Bldg., Pittsburg,	W. L. Coulson,	Adamsburg,	S. W. P. R. R.



James Kerr, Lincoln, .....	Indiana, .....	James Kerr, .....	11 B'dway, N. Y. City, .....	Lawson Blinkinsopp, .....	Lockport, .....	Pennsylvania Railroad.
Elkins Gas Coal Co. Pleasant Valley, .....	Westmoreland, .....	.....	.....	J. H. Powell, .....	Haser, .....	Pennsylvania Railroad.
American Steel Hoop Co. Isabella, .....	Westmoreland, .....	O. W. Kennedy, .....	Scottdale, .....	J. M. Gallagher, ....	Blairsville, .....	Pennsylvania Railroad.
Ray Coal Co. Ray, .....	Indiana, .....	.....	.....	Thomas Maher, .....	Blairsville, .....	Pennsylvania Railroad.
Robert Smith. Smith, .....	Indiana, .....	.....	.....	Roy Girard, .....	Blairsville, .....	Pennsylvania Railroad.
Graff Coal Co. Blacklick, .....	Indiana, .....	.....	.....	F. M. Graff, .....	Blairsville, .....	Pennsylvania Railroad.
Dixon Brothers. Dixon, .....	Indiana, .....	G. W. Dixon, .....	Blairsville, .....	.....	.....	Pennsylvania Railroad.
Glennmore Coal and Coke Co. Tearing Run, .....	Indiana, .....	.....	.....	J. M. Guthrie, .....	Indiana, .....	Pennsylvania Railroad.
Indiana Coal and Coke Co. Mitchell, .....	Indiana, .....	.....	.....	Harry McCreary, .....	Indiana, .....	Pennsylvania Railroad.
Mitchell-Watson Coal and Coke Co. Mitchell-Watson No. 1, .....	Indiana, .....	.....	.....	Thomas Maher, .....	Blairsville, .....	Pennsylvania Railroad.
Bowman Coal Mining Co. Bowman, .....	Indiana, .....	.....	.....	S. J. Robinson, .....	Saltsburg, .....	Pennsylvania Railroad.
J. W. Smith Bros. & Co. Edri, .....	Indiana, .....	.....	.....	James M. Johnston, ....	Nowrytown, ....	Pennsylvania Railroad.
Seaboard Coal Co. Seaboard, .....	Westmoreland, .....	W. A. Huff, .....	Greensburg, .....	Thomas L. Jones, ....	Greensburg, .....	S. W. P. R. R.
Johnstown Coal Co. Cramer, .....	Indiana, .....	.....	.....	H. C. Burket, .....	Greensburg, .....	Pennsylvania Railroad.



TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Second Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
<b>Westmoreland Coal Co.</b>														
Export.	Westmoreland.	498,239	3,902	1,555	503,786	.....	.....	242	617	1	1	15	.....	38
Larimer.	Westmoreland.	451,338	3,906	2,559	457,893	.....	.....	538	496	4	3	12	500	31
Westmoreland shaft.	Westmoreland.	571,591	12,237	2,223	585,761	.....	.....	255	383	2	3	15	1,500	31
Total.	.....	1,520,808	20,115	6,337	1,347,410	.....	.....	755	1,496	7	7	42	1,700	110
<b>Penn Gas Coal Co.</b>														
Coal Run.	Westmoreland.	57,298	80	116	57,494	.....	.....	116	98	.....	.....	.....	.....	7
No. 1, Penn Gas.	Westmoreland.	82,071	5,976	1,964	90,001	.....	.....	150	185	.....	.....	.....	.....	42
No. 2, Penn Gas.	Westmoreland.	182,263	9,494	3,920	195,677	.....	.....	275	350	.....	1	.....	.....	28
No. 3, Penn Gas.	Westmoreland.	124,533	.....	460	129,993	.....	.....	224	142	.....	.....	.....	.....	12
Total.	.....	443,145	15,550	6,460	465,155	.....	.....	775	775	.....	1	.....	.....	69
<b>Greensburg Coal Co.</b>														
Greensburg No. 1.	Westmoreland.	97,629	2,070	5,686	164,785	.....	10	241	96	.....	2	.....	.....	16
Greensburg No. 2.	Westmoreland.	130,728	1,827	1,161	135,816	.....	.....	250 1/2	173	.....	.....	2	100	9
Radelough.	Westmoreland.	25,000	.....	.....	25,000	.....	.....	251	23	.....	2	.....	.....	3
Total.	.....	253,357	3,907	6,847	285,601	.....	10	718 1/2	292	.....	4	2	100	28
<b>Jamison Coal and Coke Co.</b>														
Jamison No. 1.	Westmoreland.	74,240	2,610	1,290	221,110	108,110	.....	297	396	1	4	500	4,150	30
Jamison No. 2.	Westmoreland.	.....	.....	.....	.....	17,000	200	310	223	.....	5	.....	.....	.....
Jamison No. 3.	Westmoreland.	126,600	4,370	160	129,470	.....	.....	.....	.....	.....	4	30	3,000	10
Jamison No. 4.*	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	200,840	6,980	1,300	381,580	125,100	500	607	619	1	13	800	7,150	40

Loyalhanna Coal and Coke Co.	Westmoreland.	116,754	1,822	1,243	147,917	15,863	240	179	330	.....	1	.....	59	25
Loyalhanna No. 1.	Westmoreland.	15,298	4,386	110	19,714	229,000	355	240	238	.....	.....	.....	150	.....
Loyalhanna No. 2.	Westmoreland.	171,122	5,153	657	176,937	22,000	352	247	235	.....	1	.....	59	12
Total.	.....	292,081	11,358	2,010	344,568	15,863	240	656	601	.....	1	2	250	39
Huesteter-Connellsville Coke Co.	Westmoreland.	.....	5,060	1,300	288,000	229,000	355	301	422	.....	4	.....	300	40
Huesteter.	Westmoreland.	.....	6,300	1,300	270,000	22,000	352	300	415	.....	2	4	300	41
Whitney.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	.....	11,300	2,600	558,000	440,000	707	601	837	.....	2	8	600	81
American Coke Co.	Westmoreland.	72,018	4,603	1,025	410,482	221,800	400	298	437	.....	3	.....	170	40
Puritan or Baggsby.	Westmoreland.	30,965	5,022	960	122,300	58,300	553	187	395	.....	2	.....	40	32
Dorothy.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	102,683	7,625	1,985	532,812	280,300	630	485	712	.....	2	3	40	72
Atlantic Crushed Coke Co.	Westmoreland.	53,500	3,050	450	90,980	20,670	79	227	144	.....	1	.....	.....	4
Atlantic No. 1.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Atlantic No. 2.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	53,500	3,050	450	90,980	20,670	79	227	144	.....	1	.....	.....	12
The Ligonier Coal Co.	Westmoreland.	24,300	.....	47	24,947	.....	.....	231½	29	.....	.....	.....	.....	2
S. H. Smith.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ligonier No. 2.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	24,300	.....	47	24,947	.....	.....	231½	29	.....	.....	.....	.....	2
Burrell Coal Co.	Indiana.	35,108	.....	.....	35,108	.....	.....	213	29	.....	1	.....	.....	2
Burrell No. 1.	Indiana.	55,745	.....	.....	55,745	.....	.....	224	55	.....	.....	.....	.....	3
Burrell No. 2.	Indiana.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	90,853	.....	.....	90,853	.....	.....	537	84	.....	1	.....	.....	5
Maher Coal and Coke Co.	Indiana.	1,631	.....	.....	1,631	.....	.....	79	8	.....	.....	.....	.....	1
Maher No. 1.	Indiana.	44,851	.....	.....	44,831	.....	.....	260	43	.....	.....	.....	.....	3
Maher No. 2.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	46,482	.....	.....	46,462	.....	.....	339	51	.....	.....	.....	.....	4
McCreary Coke Co.	Indiana.	.....	1,723	611	29,950	18,771	48	98	67	.....	.....	.....	50	13
Graeton No. 1.	Indiana.	.....	4,415	319	102,289	60,875	150	365	157	.....	2	.....	150	50
Graeton No. 2.	Indiana.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Total.	.....	.....	6,138	930	132,239	79,626	195	403	261	.....	2	2	200	20

Production, etc., of single collieries will be found in the Recapitulation.

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Blairsville Coke Co.														
Graff, No. 1	Indiana	33,182		141	33,323			248	24					3
Graff, No. 2	Indiana	33,182		141	33,323			248	24					3
Total														
Ocean Coal Co.	Westmoreland	106,325	9,759	25,924	138,674			226	168		4			23
Ocean No. 2	Westmoreland	4,623	2,047	25	6,695			28	8					3
Total		110,948	11,806	25,949	135,369			254	176		4			26
Recapitulation.														
Westmoreland Coal Co.,	Westmoreland	1,326,898	20,175	6,337	1,347,410			755	1,496	7	7	42	1,700	100
Penn. Gas Coal Co.,	Westmoreland	443,145	15,550	6,460	465,155			755	775	1	1		1,700	88
Greensburg Coal Co.,	Westmoreland	572,757	3,937	6,847	583,601			748 1/4	283	4	4	2	1,700	40
Jamison Coal and Coke Co.,	Westmoreland	290,340	6,980	1,300	283,660			10	619	1	1	8.6	7,150	29
Lowhanna Coal and Coke Co.,	Westmoreland	562,684	11,336	2,010	586,030	125,100	200	607	37	1	1	20	250	81
Hostetter-Campbellville Coke Co.,	Westmoreland	193,682	7,635	1,986	203,303	43,000	707	601	897	2	2	40	600	72
Atlantic Coke Co.,	Westmoreland	575,501	3,050	4,450	582,842	250,300	620	455	742	3	3	20	1,100	12
Atlantic Crushed Coke Co.,	Westmoreland	24,900			20,670	20,670	79	237	144	1				3
The Liggett Coal Co.,	Westmoreland	90,833		47	24,947			537 1/2	29					5
Elm Creek Coal Co.,	Indiana	40,462			90,853			537	84	1				4
Maher Coal and Coke Co.,	Indiana				46,402			339	51					20
McNeary Coke Co.,	Indiana		6,138	920	136,259	79,626	158	408	264	2	2	200	200	4
Blairsville Coke Co.,	Indiana	33,182		141	33,323			248	24					3

Ocean Coal Co.,	Westmoreland,	110,916	11,806	25,349	125,369	.....	254	.....	4	.....	26
Charlidge Gas Coal Co.,	Westmoreland,	199,700	3,327	308	201,544	.....	306	302	1	176	19
Manor Gas Coal Co.,	Westmoreland,	238,570	4,370	378	263,148	.....	295	334	2	2	22
Spring Hill Gas Coal Co.,	Allegheny,	112,520	1,121	2,049	109,699	.....	313	126	1	1	200
W. E. Shelly,	Westmoreland,	20,131	652	60	20,733	.....	185	45	1	1	9
Penn Manor Shaft Co.,	Westmoreland,	59,063	1,170	300	64,532	.....	130	107	1	1	2
Carbon Coal Co.,	Westmoreland,	235,165	2,781	11,721	249,667	.....	318	107	2	10	9
Sawtokey Gas Coal Co.,	Westmoreland,	163,776	4,807	424	169,007	.....	276	322	1	1	30
Arona Gas Coal Co.,	Westmoreland,	265,422	855	674	266,911	.....	251	339	5	5	22
Madison Gas Coal Co.,	Westmoreland,	191,355	.....	120	191,475	.....	288	218	1	1	16
Pittsburg and Baltimore Coal Co.,	Westmoreland,	27,780	1,720	500	30,000	.....	172	104	1	1	25
Hempfield Coal Co.,	Westmoreland,	196,381	4,254	7,444	208,079	.....	313	176	1	1	1
Alexandria Coal Co.,	Westmoreland,	161,068	6,157	1,125	175,415	.....	204	249	1	1	30
Donofoe Coal and Coke Co.,	Westmoreland,	76,284	3,610	575	81,382	.....	180	229	1	1	22
Latent Coal Co.,	Westmoreland,	82,208	1,090	650	83,948	.....	221	113	1	1	18
Latrobe Coal Co.,	Westmoreland,	14,724	.....	.....	14,724	.....	253	81	1	1	13
H. C. Erick (Coke Co.),	Westmoreland,	132,550	4,789	.....	137,339	.....	294	307	2	2	4
Saxman Coal and Coke Co.,	Westmoreland,	38,253	8,632	532	47,387	.....	136	294	1	1	30
Superior Coal and Coke Co.,	Westmoreland,	78,496	916	228	80,012	.....	208	196	3	3	20
Derry Coal and Coke Co.,	Westmoreland,	68,291	2,433	131	71,155	.....	86	156	1	1	15
Millwood Coal Co.,	Westmoreland,	5,142	1,177	230	6,549	.....	71	294	140	140	12
Leedswood Coal Co.,	Westmoreland,	15,982	2,170	375	18,527	.....	238	325	1	1	16
Reese-Hammond Fire Brick Co.,	Westmoreland,	102,420	4,280	267	107,007	.....	249	239	1	1	20
Bellevue Coal and Coke Co.,	Indiana,	4,000	18,687	18,687	18,687	.....	247	131	11	150	17
James Kerr,	Westmoreland,	3,185	20	69	3,950	.....	190	19	1	1	3
Elkins Gas Coal Co.,	Indiana,	159,228	524	618	160,368	.....	192	218	65	30	2
American Steel Hoop Co.,	Westmoreland,	32,784	5,280	1,000	37,509	.....	191 1/2	218	175	50	14
Ray Coal Co.,	Westmoreland,	.....	.....	.....	252	.....	185	199	245	245	2
Robert Smith,	Indiana,	46,000	637	72	46,637	.....	245	37	37	37	9
Dixon Brothers,	Indiana,	31,085	.....	637	31,086	.....	263	60	2	2	10
Baltimore Coal and Coke Co.,	Indiana,	6,600	40	4	6,640	.....	240	40	2	2	8
Michigan Coal and Coke Co.,	Indiana,	347	.....	4	348	.....	77	25	2	2	2
Wayne Coal Mining Co.,	Indiana,	29,433	.....	250	6,600	.....	155	12	155	12	2
J. W. Smith Bros. & Co.,	Indiana,	.....	181	.....	4,845	.....	24	52	10	10	4
Seaboard Coal Co.,	Indiana,	.....	29,614	.....	29,614	.....	282	60	73	10	5
Johnstown Coal Co.,	Indiana,	.....	45	.....	3,753	.....	42	9	100	100	1
Totals,	Indiana,	5,911,518	164,226	114,697	8,222,731	.....	212	17	25	250	2
					1,498,520	.....	4,190	299,53	82	5,330	13,840
					11,517	.....	11,517	29	82	5,330	13,840
					961	.....	961				

In course of construction.

middle the entire year.

Abandoned during the year.

Estimated.



TABLE II.—Continued.

Names of Operators.	County.	Number of Boilers.			Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Horse power.		Tubular.	Steam.	Electric.									
		Cylindrical.	Horse power.												
Westmoreland Coal Co.	Westmoreland.	20	687	8	800	1,575	.....	1,850	24	1,850	4	2,000	800	.....	.....
Penn Gas Coal Co.	Westmoreland.	12	204	.....	604	908	.....	1,535	12	1,535	7	515	560	.....	.....
Greensburg Coal Co.	Westmoreland.	.....	.....	.....	310	310	.....	170	6	170	.....	601	450	.....	.....
Jameson Coal and Coke Co.	Westmoreland.	.....	.....	.....	600	600	.....	350	6	350	.....	500	200	.....	.....
Loyall's Coal and Coke Co.	Westmoreland.	.....	.....	.....	1,200	1,200	.....	1,815	14	1,815	.....	3,750	2,000	.....	.....
Hossett-Cornedville Coke Co.	Westmoreland.	15	.....	.....	1,200	1,200	.....	1,000	3	1,000	.....	1,500	1,500	.....	.....
Westmoreland	Westmoreland.	11	840	.....	810	810	.....	680	6	680	.....	623	323	.....	.....
American Coke Co.	Westmoreland.	.....	.....	.....	940	940	.....	280	2	280	.....	355	250	.....	.....
Atlantic Crushed Coal Co.	Westmoreland.	3	.....	.....	280	280	.....	.....	.....	.....	.....	.....	.....	.....	.....
The Lehigh Coal Co.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barrell Coal Co.	Indiana.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mather Coal and Coke Co.	Indiana.	.....	.....	.....	1,010	1,010	.....	475	8	475	.....	.....	.....	.....	.....
McCartney Coke Co.	Indiana.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Booth Coal Co.	Westmoreland	.....	.....	.....	1,400	1,400	.....	2,000	8	2,000	4	1,400	300	1	.....
Blairsville Coke Co.	Westmoreland	.....	.....	.....	200	200	.....	135	.....	135	.....	1,125	350	.....	.....
Harbige Gas Coal Co.	Westmoreland	.....	.....	.....	215	215	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stanton Coal Co.	Westmoreland	.....	.....	.....	150	150	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wright Hill Gas Coal Co.	Allegheny	1	.....	.....	150	150	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wright Shady.	Westmoreland	.....	.....	.....	100	174	.....	220	4	220	.....	600	200	.....	.....
Penn. Major Shaft Co.	Westmoreland	4	74	.....	350	350	.....	215	.....	215	.....	2,400	500	.....	.....
Carlton Coal Co.	Westmoreland	.....	.....	.....	350	350	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sawickly Gas Coal Co.	Westmoreland	.....	.....	.....	100	100	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arora Gas Coal Co.	Westmoreland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matheson Gas Coal Co.	Westmoreland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pittsburg and Baltimore Coal Co.	Westmoreland	.....	.....	.....	250	250	.....	800	.....	800	1	70	.....	.....	.....
Hempfield Coal Co.	Westmoreland	3	180	.....	385	565	.....	335	.....	335	.....	2,600	1,400	1	.....
Alexandria Coal Co.	Westmoreland	.....	.....	.....	615	615	.....	400	.....	400	.....	600	700	.....	.....
Bonduco Coal and Coke Co.	Westmoreland	.....	.....	.....	400	400	.....	200	.....	200	.....	195	195	1	.....
Salmon Coal Co.	Westmoreland	.....	.....	.....	200	200	.....	200	.....	200	.....	275	275	.....	.....
Huron Coal Co.	Westmoreland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hutton Coal Co.	Westmoreland	.....	.....	.....	410	460	.....	430	.....	430	3	1,300	500	.....	.....
Latrobe Coal Co.	Westmoreland	.....	.....	.....	490	710	.....	550	.....	550	.....	1,200	900	.....	.....
H. C. Frick Coke Co.	Westmoreland	.....	.....	.....	280	400	.....	.....	.....	.....	.....	1,400	1,400	.....	.....
Saxman Coal and Coke Co.	Westmoreland.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



Superior Coal and Coke Co.,	Westmoreland,	2	200	200	1	1	1	300	300	2	2
Derry Coal and Coke Co.,	Westmoreland,	4	400	400	3	4	3	3,500	1,500	17	17
Bessmer Coal Co.,	Westmoreland,			200		2					
Milwood Coal and Coke Co.,	Westmoreland,			180		2					
Reese-Hammond Fire Brick Co.,	Indiana,			15				1,200	570		1
Boileau Coal and Coke Co.,	Westmoreland,										
Indiana Coal Co.,	Indiana,	1	15	15							
Illinois Coal Co.,	Westmoreland,										
American Steel Pipe Co.,	Westmoreland,			600		3		720	720		
Ray Coal Co.,	Indiana,										
Robert Smith,	Indiana,										
Graff Coal Co.,	Indiana,										
Paxon Brothers,	Indiana,										
Glenn Coal and Coke Co.,	Indiana,										
Indiana Coal and Coke Co.,	Indiana,										
Mitchell-Watson Coal and Coke Co.,	Indiana,										
Lawman Coal Mining Co.,	Indiana,										
J. W. Smith Press. & Co.,	Indiana,			90		1	30	2	240		
Seaboard Coal Co.,	Westmoreland,	2	90	90							
Johnstown Coal Co.,	Indiana,										
Totals,		62	1,493	14,104	139	172	15,746	25,114	16,018	17	21



Jamison No. 3.....	Westmoreland.....	1	1	100	4	40	146	2	5	8	50	1	11	77	223
Jamison No. 4,*.....	Westmoreland.....	3	1	325	19	3	56	407	4	11	150	3	31	212	619
Total.....															
Loyalhanna Coal and Coke Co.															
Loyalhanna No. 1.....	Westmoreland.....	1	1	201	16	3	32	254	1	5	5	3	39	78	322
Loyalhanna No. 2.....	Westmoreland.....	1	1	22	1	5	24	1	5	5	1	1	10	24	32
Pandora.....	Westmoreland.....	1	1	165	12	3	20	202	1	20	3	2	3	33	285
Total.....		2	3	388	28	6	57	485	2	25	13	20	6	43	606
Hostetter-Connellsville Coke Co.															
Hostetter.....	Westmoreland.....	1	2	160	16	4	12	195	1	5	5	200	1	15	227
Whitney.....	Westmoreland.....	1	2	160	16	2	12	193	1	5	6	194	2	14	222
Total.....		2	4	320	32	6	24	388	2	10	11	394	3	29	449
American Coke Co.															
Puritan or Baggaley.....	Westmoreland.....	2	2	218	21	8	29	280	2	5	3	132	2	13	437
Dorothy.....	Westmoreland.....	1	1	147	16	2	35	202	1	3	3	80	2	14	305
Total.....		3	3	365	37	10	64	482	3	8	6	212	4	27	742
Atlantic Crushed Coke Co.															
Atlantic No. 1.....	Westmoreland.....	1	...	26	4	...	2	33	...	...	...	...	...	...	...
Atlantic No. 2.....	Westmoreland.....	1	1	60	6	3	4	75	1	2	4	23	2	4	36
Total.....		2	1	86	10	3	6	108	1	2	4	23	2	4	36
The Ligonier Coal Co.															
S. H. Smith.....	Westmoreland.....	1	...	20	2	1	3	27	...	...	...	...	1	1	2
Ligonier No. 2 †.....	Westmoreland.....	...	...	...	...	...	...	...	...	...	...	...	...	...	29
Total.....		1	...	20	2	1	3	27	...	...	...	...	1	1	2
Burrell Coal Co.															
Burrell No. 1.....	Indiana.....	1	...	22	2	...	...	25	...	...	...	...	2	4	29
Burrell No. 2.....	Indiana.....	1	...	47	3	...	...	51	...	...	...	...	2	1	55
Total.....		2	...	69	5	...	...	76	...	...	...	...	4	3	84
Maher Coal and Coke Co.															
Maher No. 2 †.....	Indiana.....	1	...	5	1	...	...	7	...	...	...	...	1	...	8
Maher No. 3.....	Westmoreland.....	1	1	35	3	...	40	...	...	...	...	...	1	3	43
Total.....		2	...	41	4	...	47	...	...	...	...	...	2	1	51
McCreary Coke Co.															
Gracetown No. 1.....	Indiana.....	1	...	33	3	...	8	48	1	2	2	10	3	19	67
Gracetown No. 2.....	Indiana.....	1	...	93	18	5	11	130	2	4	4	45	2	10	197
Total.....		2	...	128	21	8	19	178	3	6	6	55	3	13	264

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.								Occupations of Persons Employed Outside.								Grand total, inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.	All other employes.	Total outside.	
Blairsville Coke Co.	Indiana.	1	19			2		1	23				1				1	24
Graff No. 2,*		Indiana.	1	19			2		1	23				1				1
Total.																		
Ocean No. 1.	Westmoreland.	1	5	100		16	4	17	143	1	3	8	4		2	7	25	168
Ocean No. 2.		Westmoreland.	1	5	100		16	4	17	143	1	4	11	4		3	10	33
Total.																		
Claridge Gas Coal Co.	Westmoreland.	1	246			22	5	13	281		5	3			1	12	21	302
Manor Gas Coal Co.	Westmoreland.	1	2	267		23	7	10	310	1	4	4	2		3	10	24	334
Denmark.		Westmoreland.	1	95			8	3	5	112	1	2	4			2	5	14
Spring Hill Gas Coal Co.	Allegheny.	1	38			1	1		41						1	3	4	45
Elizabeth.	Westmoreland.	1	1	70		5	1	7	85	1	2	3			2	14	22	107
Penn Manor Shaft Co.	Westmoreland.																	

Carbon	Carbon Coal Co.	Westmoreland.	2	182	18	10	212	1	3	4	22	3	17	50	262
Sewickley	Sewickley Gas Coal Co.	Westmoreland.	1	2	187	18	6	13	227	1	5	3	2	28	269
Arona	Arona Gas Coal Co.	Westmoreland.	1	272	20	6	12	311	1	5	3	2	15	28	339
Madison	Madison Gas Coal Co.	Westmoreland.	1	183	10	4	4	212	1	2	2	2	9	16	218
Baltimore No. 1	Pittsburg and Baltimore Coal Co.	Westmoreland.	1	80	5	1	1	88	1	2	3	1	9	16	164
Hempfield	Hempfield Coal Co.	Westmoreland.	2	123	13	2	8	148	4	5	1	2	17	28	176
Alexandria	Alexandria Coal Co.	Westmoreland.	1	245	22	4	12	285	1	5	8	49	3	15	366
Donahoe	Donahoe Coal and Coke Co.	Westmoreland.	1	103	7	3	3	114	1	3	3	57	4	20	22
Salem	Salem Coal Co.	Westmoreland.	1	60	10	2	10	87	3	3	2	18	2	2	113
Huron	Huron Coal Co.	Westmoreland.	1	64	4	4	69	1	1	1	1	1	10	12	81
Latake	Latake Coal Co.	Westmoreland.	1	132	26	15	2	227	1	6	6	60	3	4	307
Monastery	H. C. Brick Coke Co.	Westmoreland.	1	74	14	3	4	97	2	3	12	70	2	10	168
M. Saxman	Saxman Coal and Coke Co.	Westmoreland.	1	80	11	1	7	100	1	2	1	20	2	5	171
Superior No. 1	Superior Coal and Coke Co.	Westmoreland.	1	36	10	2	5	108	1	2	1	24	2	3	140
Derry Shaft	Derry Coal and Coke Co.	Westmoreland.	2	220	16	15	265	1	3	5	43	3	5	60	325
Saint Clair	Bessemer Coke Co.	Westmoreland.	1	128	14	4	6	153	1	2	5	116	2	20	290
Millwood	Millwood Coal and Coke Co.	Westmoreland.	1	86	17	2	6	107	1	4	3	1	1	14	131
Indiana	Reese Hammond Pipe Brick Co.	Indiana.	1	14	2	17	17	1	1	1	1	1	2	2	10





[illegible]

\*In course of construction.  
 †Idle the entire year.  
 ‡Abandoned during the year.  
 §Estimated.

## Recapitulation.

[illegible]

## Recapitulation—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.					Occupations of Persons Employed Outside.												
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.	All other employes.	Total outside.	Grand total, inside and outside.	
Latreche Coal Co.,	Westmoreland.	1	1	182		26	17	227	1		9			60		4	80	307	
H. C. Frick Coke Co.,	Westmoreland.	1	1	74		11	3	90	2	1	9			20		10	99	196	
Saxman Coal and Coke Co.,	Westmoreland.	1		90		14	1	105						21		5	21	131	
Superior Coal and Coke Co.,	Westmoreland.	1		100		10	1	110						24		3	22	110	
Derry Coal and Coke Co.,	Westmoreland.	2		230		16	15	265	1					43		20	60	335	
Bessemer Coal and Coke Co.,	Westmoreland.	1		128		17	4	153	1					116		20	146	269	
Millwood Coal and Coke Co.,	Westmoreland.	1		80		17	1	100	1							14	24	131	
Reese-Hartman and Five Brick Co.,	Indiana.	1		14		2	2	17								2	2	19	33
Belvoir Coal and Coke Co.,	Westmoreland.	1		10		14	1	25								1	5	19	43
James Keor,	Indiana.	1		19		14	1	35									16	218	
Elkins Gas Coal Co.,	Westmoreland.	1		179		14	6	202	1					52		12	87	298	
American Steel Hoop Co.,	Westmoreland.	1	1	88		12	1	112	1							20	39	139	
Rat Coal Co.,	Indiana.	1		20		13	1	35								1	4	36	
Garret Coal Co.,	Indiana.	1		30		13	1	45								3	40	60	
Dusen Brothers,	Indiana.	1		30		13	1	45								3	40	60	
Glenmore Coal and Coke Co.,	Indiana.	1		21		12	1	36								1	1	25	
Indiana Coal and Coke Co.,	Indiana.	1		40		12	2	46			1			5			6	52	
Mitchell-Watson Coal and Coke Co.,	Indiana.	1		40		4	1	46										4	60
Bayview Coal Mining Co.,	Indiana.	1		40		4	2	50			1					3	3	9	9
J. W. Smith Bros. & Co.,	Indiana.	1		8		1	1	10	1								11	11	11
Seaboard Coal Co.,	Westmoreland.	1		13		2	1	16								1	1	17	17
Johnstown Coal Co.,	Indiana.	1		13		2	1	16											
Totals and average.		73	43	7,229		704	199	8,924	46	170	191	66	1,392	97	621	2,553	11,517		

TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Westmoreland Coal Co.,	Westmoreland.	251-3	253-4	253-4	25	25	24	22	26	24	25	241-3	222-3	292.42
Penn Gas Coal Co.,	Westmoreland.	20	12 $\frac{1}{2}$	16 $\frac{1}{2}$		8 $\frac{1}{2}$	12 $\frac{1}{2}$	15	15 $\frac{1}{2}$	14 $\frac{1}{2}$	18 $\frac{1}{2}$	21	21	188.75
Greenbush Coal Co.,	Westmoreland.	241-3	27 $\frac{1}{2}$	21	22	231-3	221-3	21 $\frac{1}{2}$	19	19	22	231-3	18	263.68
Jannison Coal and Coke Co.,	Westmoreland.	27	24	26	26	25	26	27	25	27	25	26	26	310
Wagner Coal and Coke Co.,	Westmoreland.	24	21	22	21	201-3	271-3	26	21-3	20	252-3	222-3	222-3	219
Westmoreland Coal and Coke Co.,	Westmoreland.	27	21	26	26	27	23	26	25	25	27	25	25	250.50
Westmoreland Coal Co.,	Westmoreland.	27	25	26	26	27	23	26	25	25	27	25	25	250.50
Atlantic Crushed Coke Co.,	Westmoreland.	21	18	19	20	19	20	13	16	16	19 $\frac{1}{2}$	22 $\frac{1}{2}$	21	227
The Lehigh Coal Co.,	Westmoreland.	22	20 $\frac{1}{2}$	223 $\frac{1}{2}$	25	18 $\frac{1}{2}$	14 $\frac{1}{2}$	14 $\frac{1}{2}$	12	11 $\frac{1}{2}$	23 $\frac{1}{2}$	22 $\frac{1}{2}$	23	231.25
Burton Coal Co.,	Indiana.	20 $\frac{1}{2}$	10 $\frac{1}{2}$	23	23	23	22 $\frac{1}{2}$	23 $\frac{1}{2}$	22 $\frac{1}{2}$	24	25	22	23	248.50
Mather Coal and Coke Co.,	Indiana.	25	22	24	12	20	22	22	24	19	24	17	20	249
McHenry Coal Co.,	Indiana.	20 $\frac{1}{2}$	23	25	26	27	24 $\frac{1}{2}$	25 $\frac{1}{2}$	27	25	26	25	21	301.50
Beauregard Coal Co.,	Indiana.	22	15	24	24	19	18	23	18	22	23	18	21	247
Ocean Coal Co.,	Westmoreland.	19	18	21	15	9	22	22	19	15	18	26	22	246
Charles Gas Coal Co.,	Westmoreland.	26	23	26	26	27	23	26	27	24	27	25	25	306
Major Gas Coal Co.,	Westmoreland.	26	23	26	26	27	23	26	27	24	27	25	24	295
Spring Hill Gas Coal Co.,	Allegheny.	27	24	26	26	27	25	27	25	26	26	27	27	313
W. B. Skelly,	Westmoreland.	26	21	19	12	14	14	18	15	16	13	10	8	186
Carl and Shart Co.,	Westmoreland.	23 $\frac{1}{2}$	19 $\frac{1}{2}$	18 $\frac{1}{2}$	12	23 $\frac{1}{2}$	21	25 $\frac{1}{2}$	19 $\frac{1}{2}$	21	15	17	13	250
Sawickley Gas Coal Co.,	Westmoreland.	22	17	23	23	23	21	23	23	24	26	22	22	272
Arnot Gas Coal Co.,	Westmoreland.	22	19	21	22	22	21	24	25	24	26	19	16	251
Marrison Gas Coal Co.,	Westmoreland.	23	20	24	25	22	25	26	26	24	26	24	23	288
Pittsburg and Baltimore Coal Co.,	Westmoreland.	27	24	26	26	27	25	27	21	25	26	25	21	172
Remondell Coal Co.,	Westmoreland.	25	24	25	26	26	25	25	27	25	27	26	26	313
Alexandria Coal Co.,	Westmoreland.	27	24	25	26	26	25	25	26	24	25	23	20	244
Deane Coal and Coke Co.,	Westmoreland.	17	15	19	23	17	16	21	19	21	24	20	17	229
Salem Coal Co.,	Westmoreland.	26	21	15	24	24	25	15	17	15	19	22	22	245
Huron Coal Co.,	Westmoreland.	.....	3	23	23	25	25	25	26	23	27	26	27	253
Lattin Coal Co.,	Westmoreland.	26	24	26	22	24	25	23	24	23	27	25	25	284
R. C. Erick and Coke Co.,	Westmoreland.	21	22	25	21	19	14	15	14	22	26	23	23	236
St. C. Erick and Coke Co.,	Westmoreland.	27	15	20	26	26	25	26	27	25	27	26	25	136
Superior Coal and Coke Co.,	Westmoreland.	27	24	26	23	23	24	26	27	24	27	26	23	288
Berry Coal and Coke Co.,	Westmoreland.	27	24	26	23	23	24	21	21	19	27	26	26	288

TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Bassett Coal Co., .....	Westmoreland.	10	13	24	25	26	23	22	23	21	24	25	11	219
Milward Coal and Coke Co., .....	Westmoreland.	26	24	26	25	26	24	25	25	25	25	25	25	267
Reese-Hammond Fire Brick Co., .....	Indiana.	23	25	25	15	25	25	25	25	25	25	25	25	294
Redbar Coal and Coke Co., .....	Westmoreland.	19	9	9	13	17	25	25	13	19	23	23	24	179
James Kerr, .....	Indiana.	18 $\frac{1}{2}$	10 $\frac{1}{2}$	12	11	17	16	18 $\frac{1}{2}$	6	9	20 $\frac{1}{2}$	7	18	192.50
Elkins Gas Coal Co., .....	Westmoreland.	26	14	20	20	26	26	26	19	17 $\frac{1}{2}$	20 $\frac{1}{2}$	26	26 $\frac{1}{2}$	194.50
American Steel Hoop Co., .....	Westmoreland.	23	20	20	20	26	26	26	15	20	24	26	26	185
Ray Coal Co., .....	Indiana.	24	18	23	20	23	19	24	29	21	22	23	26	263
Robert C. Smith, .....	Indiana.	19	19	25	25	10	24	17	13	24	19	25	20	240
Clayton, .....	Indiana.	19	19	25	25	10	24	17	13	24	19	25	20	240
Dixon, .....	Indiana.	20	21	25	21	20	20	15	20	15	15	20	20	155
Glenmore Coal and Coke Co., .....	Indiana.	20	21	25	21	20	8	8	20	15	15	20	25	155
Indiana Coal and Coke Co., .....	Indiana.	22	23	25	22	22	24	24	24	21	26	24	25	282
Mitchell-Watson Coal and Coke Co., .....	Indiana.	22	23	25	22	22	24	24	24	21	26	24	25	282
Bowman Coal Mining Co., .....	Indiana.	22	23	25	22	22	24	24	24	21	26	24	25	282
J. W. Smith Bros. & Co., .....	Westmoreland.	26	16	21	21	22	24	24	24	21	26	24	25	193
Seaboard Coal Co., .....	Indiana.	26	16	21	21	22	24	24	24	21	26	24	25	193
Johnstown Coal Co., .....	Indiana.	26	16	21	21	22	24	24	24	21	26	24	25	212
Totals and average. ....		19.76	17.03	18.95	18.50	19.33	18.77	20.50	19.77	19.29	21.44	21.75	21.59	236.38



TABLE IV.—List of fatal accidents that occurred in and about the mines of the Second Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	9 William Stevenson,....	English,....	Driver,....	27	M.	1	2	Atlantic No. 2,....	Westmoreland,	Fatally injured; caught between car and pillar.
	9 John Yapsik,....	Pole,....	Miner,....	37	M.	1	2	Penn Manor,....	Westmoreland,	Fatally injured by a fall of coal.
	14 Peter Kilday,....	Scott,....	Roadman,....	38	M.	1	2	Sewickley,....	Westmoreland,	Killed; run over by cars.
Feb.	4 William Guiseppe,....	Italian,....	Miner,....	28	M.	1	2	Millwood,....	Westmoreland,	Fatally injured by a fall of coal.
	18 Patrick Hughes,....	Irish,....	Miner,....	27	M.	1	2	London,....	Westmoreland,	Instantly killed by a fall of slate.
	19 Joseph Loughery,....	Scott,....	Miner,....	19	S.	1	2	Alexandria,....	Westmoreland,	Instantly killed; caught between car and coal pillar.
	26 Mathias Annsitz,....	Austrian,....	Miner,....	33	M.	1	2	Dorothy,....	Westmoreland,	(Instantly killed by the same fall of slate.
	26 Joseph Epovich,....	Austrian,....	Miner,....	31	M.	1	2	Dorothy,....	Westmoreland,	Fatally injured; caught between car and pillar.
	27 George Uhas,....	Slav,....	Machine loader,....	38	S.	1	2	Westmoreland shaft,....	Westmoreland,	Instantly killed by a fall of "horse-back" slate.
March	15 George Lindsay,....	American,....	Miner,....	28	M.	1	1	Jamison No. 1,....	Westmoreland,	Instantly killed by a fall of "horse-back" slate.
	16 Joseph Georsa,....	Italian,....	Machine loader,....	27	S.	1	2	Larimer,....	Westmoreland,	Instantly killed by a fall of slate.
April	2 Andrew Collissa,....	Slav,....	Door boy,....	13	S.	1	2	Graceton No. 2,....	Indiana,....	Instantly killed by runaway cars.
	31 John Heckman,....	German,....	Miner,....	39	M.	1	6	Monastery,....	Westmoreland,	Fatally injured by a fall of slate.
May	31 George Collissa,....	Hungarian,....	Miner,....	37	M.	1	6	Graceton No. 2,....	Westmoreland,	Fatally injured by a fall of slate.
June	1 Frank Chitense,....	Italian,....	Miner,....	57	M.	1	2	Monroe,....	Westmoreland,	Instantly killed by a fall of coal.
	3 Frank Lightman,....	English,....	Ass. mine boss,....	53	M.	1	2	Cladnet,....	Westmoreland,	Killed; run over by cars.
	21 Tom Halliday,....	Irish,....	Flag boss,....	57	M.	1	2	Larimer,....	Westmoreland,	Fatally injured by being struck by cars.
July	1 John Hudis,....	Pole,....	Miner,....	32	M.	1	5	Monastery,....	Westmoreland,	Instantly killed by a fall of slate.
	3 Gottfried Eichner,....	German,....	Miner,....	46	M.	1	4	Latrobe,....	Westmoreland,	Back broken by fall of roof; died July 24.
	19 Samuel Smith,....	American,....	Outside laborer,....	47	M.	1	4	Baltimore No. 1,....	Westmoreland,	Instantly killed by being caught in ventilating fan.
Aug.	7 Antonio Serretto,....	Italian,....	Machine loader,....	27	S.	1	2	Westmoreland shaft,....	Westmoreland,	Instantly killed by a fall of coal.
	7 Wm. S. Hall,....	American,....	Pumper,....	53	M.	1	4	Monastery,....	Westmoreland,	Instantly killed by being struck by cars.
	24 M. C. O'Brien,....	American,....	Fire boss,....	29	M.	1	3	Whitney,....	Westmoreland,	Fatally injured by a fall of slate.
Oct.	7 Glen Woods,....	American,....	Oiler,....	16	S.	1	2	Export,....	Westmoreland,	Fatally injured by a fall of slate.
	11 Alfred Guilim,....	Wash,....	Miner,....	53	M.	1	2	Spring Hill,....	Allegheny,	Instantly killed by a fall of slate.
Nov.	25 Joseph Lashko,....	Austrian,....	Driver,....	27	M.	1	2	Whitney,....	Westmoreland,	Caught between car and pillar; died November 28th.
	26 Mike Krayak,....	Slav,....	Miner,....	50	M.	1	3	Saint Clair,....	Westmoreland,	Fatally injured; run over by cars.
Dec.	11 John Molnar,....	Austrian,....	Driver,....	26	S.	1	2	Larimer,....	Westmoreland,	Kicked by a mule; died Dec. 13th.
	27 Antonio Cacioli,....	Italian,....	Miner,....	22	S.	1	2	Pandora,....	Westmoreland,	Instantly killed by a fall of slate.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Second Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.								
1	Gabriel Fischer.	Russian.	Miner.	39	Y	Ocean No. 1.	Westmoreland.	Back injured by a fall of slate.
4	Edward Reynolds.	American.	Caster.	17	Y	Indiana.	Indiana.	Arm broken; thrown from runaway car.
15	Frank Keffler.	American.	Miner.	37	Y	Pandora.	Westmoreland.	Leg bruised; tripped and fell.
19	Robert Lehman.	German.	Miner.	29	Y	Sewickley.	Westmoreland.	Leg broken by fall of slate.
21	George Davis.	American.	Machine leader.	37	Y	No. 2 Penn Gas.	Westmoreland.	Collar bone broken; thrown from car.
Feb.								
2	Steve McHalek.	Slav.	Miner.	24	Y	Whitney.	Westmoreland.	Injured; caught between roof and truck.
8	Joe Silvis.	American.	Miner.	22	Y	Rudolph.	Westmoreland.	Arm broken by fall of slate.
11	James Rothwell.	English.	Miner.	46	Y	Jamison No. 3.	Westmoreland.	Ribs and nose broken by fall of coal.
13	Tim Kaskusky.	Pole.	Miner.	11	Y	Sewickley.	Westmoreland.	Leg broken; caught between cars.
16	Steve Runkel.	American.	Miner.	29	Y	Carlton.	Westmoreland.	Injured; fall of roof.
17	Stephen Lestelovsky.	Italian.	Miner.	20	Y	Ocean No. 1.	Westmoreland.	Arm crushed by fall of slate.
22	Joseph Cassella.	Russian.	Driver.	38	Y	Whitney.	Westmoreland.	Arm crushed by fall of slate.
April								
1	Joseph Chapek.	American.	Miner.	16	Y	Whitney.	Westmoreland.	Injured; kicked by a horse.
6	Thomas Burke.	Slav.	Miner.	69	Y	Pandora.	Westmoreland.	Leg broken between car and pillar.
12	Simon Bayle.	Italian.	Miner.	29	Y	Milwood.	Westmoreland.	Hip dislocated by a fall of slate.
27	Vasco Thertino.	Italian.	Miner.	35	Y	Pleasant Valley.	Westmoreland.	Ribs broken by a fall of slate.
May								
8	Cyprian Filote.	Italian.	Miner.	46	Y	Milwood.	Westmoreland.	Thigh broken by a falling cage.
11	Frank Monti.	Italian.	Miner.	32	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	John Scarpini II.	Italian.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Peter Porets.	Italian.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Mike Veson.	Italian.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Anton Pasadelli.	Italian.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Anton Pasadelli.	Italian.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Fugli Fugli.	Italian.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Richard Brown.	American.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
11	Levi Baumbach.	American.	Miner.	21	Y	Milwood.	Westmoreland.	Bruised by falling cage.
21	Andy Jamore.	Slav.	Machine leader.	48	Y	Jamison No. 3.	Westmoreland.	Arm crushed by fall of slate, necessitating amputation.
June								
21	John Chlosky.	Slav.	Machine leader.	32	Y	Jamison No. 3.	Westmoreland.	Injured by fall of slate.
26	Andy Mosser.	Slav.	Rescan.	25	Y	Whitney.	Westmoreland.	Both legs broken by fall of slate.
15	John Ruffner.	American.	Miner.	25	Y	Greensburg No. 1.	Westmoreland.	Leg broken by a fall of slate.
15	J. C. Leaphor.	American.	Miner.	51	Y	Smith.	Indiana.	Thigh broken by a fall of slate.
21	Bernard Farker.	American.	Miner.	21	Y	Arena.	Westmoreland.	Thigh broken by a fall of slate.
21	August Tassozzi.	Italian.	Miner.	19	Y	Dennmark.	Westmoreland.	Leg fractured by a fall of coal.
July								
8	John Eagenburger.	Slav.	Miner.	28	Y	Whitney.	Westmoreland.	Nose broken by a fall of slate.

Aug.	9	Mike Shafran,	Slav,	Miner,	25	M.	Latrobe,	Westmoreland,	Both arms broken; struck by cars.
	10	John Lemowitz,	Pole,	Machine loader,	30	S.	Clarids,	Westmoreland,	Foot crushed by a fall of slate.
	11	Andy Guarnetta,	Italian,	Driver,	16	S.	Westmoreland shaft,	Westmoreland,	Leg broken by a fall of slate.
	8	Mike Lee,	Italian,	Miner,	19	S.	Millwood,	Westmoreland,	Shoulder dislocated; caught between car and door frame.
Sept.	9	Salvatore Lee,	Italian,	Miner,	24	S.	Millwood,	Westmoreland,	Back injured by fall of slate.
	10	Mike Ondra,	Pole,	Miner,	38	M.	Hostetter,	Westmoreland,	Leg fractured by fall of slate.
	14	George Rusnick,	Pole,	Miner,	46	M.	Jamison No. 2,	Westmoreland,	Bruised about body; caught between cars and pillar.
	17	John Iwondale,	English,	Miner,	57	M.	Jamison No. 2,	Westmoreland,	Rib broken by fall of slate.
	18	John Batchoy,	Slav,	Miner,	36	M.	Puritan,	Westmoreland,	Leg broken by fall of slate.
	19	Joseph Cook,	German,	Machine loader,	26	M.	Madison,	Westmoreland,	Leg broken by fall of slate.
	20	Alex. Pike,	Russian,	Machine loader,	32	M.	Westmoreland shaft,	Westmoreland,	Leg broken by fall of slate.
	21	Stiney Bylock,	Pole,	Miner,	34	S.	Hostetter,	Westmoreland,	Leg broken by fall of roof.
	24	George Nesbitt,	Slav,	Driver,	24	M.	Hostetter,	Westmoreland,	Injured; caught between car and pillar.
	9	Joseph Stelmek,	Slav,	Miner,	34	M.	Jamison No. 2,	Westmoreland,	Leg broken by a fall of slate.
Oct.	10	John Madan,	Italian,	Miner,	38	M.	Hostetter,	Westmoreland,	Collar bone and leg broken by fall of roof.
	12	Abram Canfield,	Austrian,	Miner,	39	M.	Denmark,	Westmoreland,	Injured internally by a fall of coal.
	16	James Martin,	American,	Miner,	44	M.	Radebaugh,	Westmoreland,	Injured internally by a fall of coal.
	17	John Curitto,	Italian,	Miner,	43	S.	Jamison No. 2,	Westmoreland,	Leg broken by mine cars.
	17	John Nerieli,	Italian,	Machine loader,	29	S.	Larimer,	Westmoreland,	Leg broken by a fall of slate.
	18	Lewis Hammond,	American,	Tippleman,	40	M.	Greensburg No. 1,	Westmoreland,	Knee joint dislocated; struck by haulage rope.
	23	Robert Mansfield,	English,	Miner,	42	M.	Sewickley,	Westmoreland,	Leg broken and foot crushed, necessitating amputation; run over by cars.
	27	John Nefodi,	Hungarian,	Miner,	30	M.	Greeston No. 2,	Indiana,	Back injured by a fall of roof.
	27	Andy Chutinsky,	Pole,	Miner,	28	M.	Greeston No. 2,	Indiana,	Back injured by a fall of roof.
	27	John Kruminer,	Pole,	Miner,	32	M.	Latrobe,	Westmoreland,	Compound fracture of left leg; fall of roof.
Nov.	1	Lin George,	Italian,	Miner,	40	M.	Elizabeth,	Westmoreland,	Leg broken by a fall of slate and coal.
	8	Edward C. Galloway,	American,	Miner,	28	M.	Sewickley,	Westmoreland,	Injured by a fall of slate.
	8	Bartholmew Farraco,	Italian,	Miner,	34	M.	Ocean No. 1,	Westmoreland,	Leg broken in two places, collar bone broken and injured internally by a fall of slate.
	9	G. F. Fritchman,	American,	Miner,	37	S.	Carlton,	Westmoreland,	Leg broken by a fall of coal.
Nov.	11	Charles Probert,	English,	Miner,	57	M.	Spring Hill,	Allegheny,	Back injured by a fall of slate and coal.
	14	Joseph Kravatch,	Pole,	Miner,	30	S.	Clarids,	Westmoreland,	Leg broken by a fall of slate.
	19	Nicholas Bailey,	Slav,	Miner,	22	S.	Jamison No. 3,	Westmoreland,	Leg broken; caught between mine cars.
	22	David M. Anderson,	American,	Tippleman,	41	M.	Durrell No. 1,	Indiana,	Three toes injured; run over by mine cars.
	26	Adolph Schmitt,	German,	Miner,	59	S.	Sewickley,	Westmoreland,	Leg crushed, necessitating amputation; run over by mine cars.
	28	John Auzurst,	Pole,	Miner,	27	S.	Donohoe,	Westmoreland,	Leg broken and head cut by a fall of coal.
	15	Thomas McCormick,	American,	Driver,	21	S.	Monastery,	Westmoreland,	Right foot and ankle crushed between mine car and fall of roof.
	24	Paul Zwick,	Austrian,	Machine loader,	21	S.	Larimer,	Westmoreland,	Toe cut off by mining machine.
	25	Carl Sandrik,	Austrian,	Machine loader,	25	S.	Larimer,	Westmoreland,	Thigh broken by a fall of slate.

TABLE V—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Dec. 2	Albert Garland, .....	American, ..	Miner, .....	57	M	Jamison No. 2, .....	Westmoreland,	Back sprained by a fall of coal.
6	Richard Stump, .....	American, ..	Miner, .....	22	M	Smith, .....	Indiana, .....	Head cut and bruised; fell between cars.
11	Mike Vady, .....	Italian, ....	Miner, .....	35	M	Loyalhanna No. 1, .....	Westmoreland,	Leg broken by a fall of slate and coal.
12	Nick Zinid, .....	Austrian, ...	Miner, .....	23	S	Huron, .....	Westmoreland,	Foot broken by a fall of coal, necessitating amputation.
24	George Bobsack, .....	Slav, .....	Miner, .....	31	S	Jamison No. 1, .....	Westmoreland,	Breast injured by a fall of "horseback" slate.
26	E. Miller, .....	American, ..	Driver, .....	23	S	Jamison No. 1, .....	Westmoreland,	Leg injured; fell under cars.
26	C. Franklin, .....	American, ..	Miner, .....	32	M	Jamison No. 1, .....	Westmoreland,	Injured by fall of "horseback," slate.
26	E. Glen, .....	Italian, ....	Miner, .....	36	S	Jamison No. 1, .....	Westmoreland,	Foot injured; run over by car.
26	John Antonia, .....	Italian, ....	Miner, .....	37	S	Huron, .....	Westmoreland,	Leg broken by a fall of coal.
28	John Simnow, .....	Slav, .....	Miner, .....	27	S	Export, .....	Westmoreland,	Leg broken; run over by cars.



# Third Bituminous District.

ALLEGHENY, ARMSTRONG, BUTLER, BEAVER, CLARION, LAWRENCE,  
JEFFERSON AND WESTMORELAND COUNTIES.

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Mercer, Pa., February, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In compliance with the Bituminous mining act approved May 15, 1893, I herewith submit my annual report of the Third Bituminous District for the year ending December 31, 1901.

Owing to the change made in the boundary lines of the different districts and the appointment of two additional Inspectors, this district has been very much enlarged during the year 1901. This fact alone will account for the very large increase in the number of mines, tonnage and employes of this district. The general prosperity of the district would have been more marked had the coal companies been supplied with adequate car facilities. Nothing otherwise (except a local strike about prices to be paid miners for taking up floor in rooms at two of the mines, State Line and Sterling, in Beaver county), has occurred to disturb trade conditions in the district during the year.

Seven persons lost their lives, and forty were injured in and about the mines of the district during the year. This is an increase of one in the fatal, and a decrease of thirteen in the non-fatal accidents as compared with those of the year 1900, but if the number of deaths is compared with the coal tonnage for the last two years, the death rate is nearly equal. Four of those who lost their lives were the victims of their own neglect, one lost his life by disobeying the orders of the mine foreman, and two were killed through errors of judgment.

A description of the mines, the general statistics, etc., will be found in another part of the report.

All of which is respectfully submitted,

THOMAS K. ADAMS,  
Inspector.



The following is a summary of the mining statistics and classification of the accidents. The figures denoting production, shipment, etc., are short tons:

Number of mines in the district, .....	100
Number of mines in operation during 1901, .....	103
Number of tons of coal produced, .....	5,604,079
Number of tons shipped, .....	4,940,015.5
Number of tons used in the manufacture of coke, approximately, .....	257,694.5
Number of tons used for steam at the mines, .....	108,477
Number of tons sold to employes and others, .....	297,892
Number of tons of coal produced by pick mining, approximately, .....	3,871,955
Number of tons produced by compressed air machines, approximately, .....	1,560,780
Number of tons produced by electrical machines, approximately, .....	171,344
Number of coke ovens, .....	403
Number of tons of coke produced, .....	151,585
Number of persons employed inside of the mines, ...	7,799
Number employed outside of the mines, .....	1,012
Number of mules in use inside of the mines, .....	665
Number of fatal accidents, .....	7
Number of tons of coal produced per each fatal accident, .....	800,582
Number of non-fatal accidents, .....	40
Number of tons of coal produced per each non-fatal accident, .....	140,102
Number of persons employed per each fatal accident, .....	1,258+
Number of persons employed per each non-fatal accident, .....	220+
Number of wives left widows by accidents, .....	4
Number of orphans, .....	15
Number of kegs of powder used, .....	24,910
Number of pounds of dynamite used, .....	13,731
Number of cylindrical boilers in use, .....	33
Number of tubular boilers in use, .....	100
Number of steam locomotives, .....	9
Number of electric motors, .....	5
Number of new mines opened, .....	23
Number of old mines abandoned, .....	3



TABLE A Continued.

Name of Companies.	Total number of tons of coal produced.	Number of lives lost.	Number of tons of coal produced per life lost.	Number of persons seriously injured.	Number of tons of coal produced per person seriously injured.	Total number of persons employed.	Number of persons employed per life lost.	Number of persons employed per person injured.	Average number of tons of coal produced per employee.
Carrier Brothers.	30,061					70			
Catfish Run Coal Company.	15,426			1	15,026	35		35	
Gilpin Coal Company.	70,765			2	33,883	114		55	
Pittsburg Coal Company.	67,978			1	10,617	20		20	
Freeport Coal Company.	10,617					69			
Haddon Coal Company.	43,767					1,640		182+	
Jefferson, Clearfield Coal and Iron Company.	1,430,022	3	476,677	9	158,892+	158			
McPetridge Brothers.	150,152					96			
Hill Coal Company, Limited.	2,151					37			
Hillville Coal and Mining Company.	8,500					15			
Lexington Coal Company.	21,418					65			
Blair County Coal Company, Limited.	20,448			2	63,250	135		67+	
Pittsburg Coal and Buffalo Company.	126,500					35			
Pardee Coal Company.	9,526					90			
Turner Coal, Coke and Mining Company.	53,624					21			
Turner Coal, Coke and Mining Company.	24,254			1	59,000	96		96	
American Sheet Steel Company.	59,000					22			
Kerr Coal Company.	7,167					77			
Lucas Coal Company.	15,000					136		136	
Ben Franklin Coal Company.	41,200			1	87,748	96			
C. P. McCafferty.	87,748					176			
Mosgrove Coal Works.	36,129					24			
Monterey Coal Company.	16,718					268		268	
Pennsylvania Salt Manufacturing Company.	7,167			1	158,675	533		533	
Nellie Coal Company.	158,675			2	220,567	134		134	
Oak Ridge Mining Company.	441,134	1	441,134	1	101,962	98			
New York and Cleveland Gas Coal Company.	101,962					38			
Miller Brothers.	45,884					32		32	
Pepp Coal and Coke Company.	13,321			1	5,908	103			
Rearing Run Coal and Coke Company.	5,908			4	17,507.7	126		31+	
Leechburg Coal and Coke Company.	80,381					52			
Donnelly, Dunham and Company.	70,031					52			
Royce Coal Company.	16,822					32			
George E. Tener.	46,782					32			
George G. Stace.	30,143					32			
Campbell, Lowther Coal Company.	5,288								

Sterling Mining Company, W. H. Warner, .....	16,124	.....	.....	.....	108	.....	.....
Standard Coal Mining Company, .....	19,326	.....	.....	.....	131	.....	.....
State Line Coal Company, .....	41,710	.....	.....	.....	49	.....	.....
Sterling Coal Company, .....	27,385	.....	.....	.....	61	.....	.....
Silgo Coal Company, .....	66,030	.....	1	66,030	61	.....	.....
Mercer Iron and Coal Company, .....	94,903	.....	.....	.....	180	.....	.....
Thompson Run Coal Company, .....	58,368	.....	.....	.....	87	.....	.....
West Penn Mining Company, .....	37,490	.....	.....	.....	72	.....	.....
The VanVleet Coal Company, .....	10,000	.....	.....	.....	40	.....	.....
James S. Moore, .....	5,000	1	5,000	.....	30	.....	.....
Totals and average, .....	5,604,079	7	800,582	40	140,102	1,258+	220+
					8,811	1,258+	686+

TABLE B—Classification of Accidents.

	Killed.	Injured.	Total.
By fall of coal and roof, .....	4	23	26
By mine cars, .....	3	8	11
By miscellaneous causes inside, .....		2	2
By miscellaneous causes outside, .....		7	7
Total, .....	7	40	47

TABLE C—Occupations of Persons Killed and Injured.

	Killed.	Injured.	Total.
Miners, .....	4	19	23
Drivers, .....	1	8	9
Loaders, .....		1	1
Machine cutters, .....		3	3
Scrappers, .....		1	1
Weighmasters, .....		2	2
Outside foreman, .....	1		1
Outside laborers, .....	1	3	4
Engineers, .....		1	1
Trappers, .....		1	1
Carpenters, .....		1	1
Total, .....	7	40	47

TABLE D—Nationalities of Persons Killed and Injured.

	Killed.	Injured.	Total.
American, .....	3	24	27
Germans, .....		5	5
Welsh, .....	1	2	3
Scotch, .....		1	1
English, .....		4	4
Poles, .....	2		2
Italians, .....		3	3
Hungarians, .....		1	1
Total, .....	7	40	47





TABLE—Continued.

Name of Mine.	Haulage.	Kind of Opening.	Pick or Machine.	Type of Machine.	Motive Power Used.	Number of Machines.
Haddon.	Mule.	Drift.	Pick.			
Hill.	Mule and rope.	Drift.	Pick.			
Hickory.	Mule.	Shaft.	Pick.			
Hamilton.	Mule and rope.	Drift.	Pick and machines.	Harrison and Sullivan.	Compressed air.	S-1 H-19 20
Hillville.	Mule.	Drift.	Pick.			
Hites.	Mule and rope.	Drift.	Pick.			
Jannetta.	Electric motors.	Drift.	Machines.	Jeffrey & Morgan-gardner.	Electricity.	J-4 M. G.-1 5
Kerr No. 1.	Mules.	Drift.	Pick.			
Kerr No. 8.	Mule.	Drift.	Pick.			
Kirkpatrick.	Mule.	Drift.	Pick.			
Keystone (C).	Mule.	Drift.	Pick.			
Keystone No. 1 (B.).	Mule.	Drift.	Pick.			
Keystone No. 2 (B.).	Mule.	Drift.	Pick.			
Key or "K."	Mule.	Drift.	Pick.			
Lucasco.	Mule.	Drift.	Pick.			
Monarch.	Mule.	Drift.	Machines.	Sullivan.	Compressed air.	7
Mosgrove.	Mule.	Drift.	Pick.			
Mont-rey.	Mule.	Drift.	Pick.			
Mizener.	Mule.	Drift.	Pick.			
Maplewood.	Mule and rope.	Drift.	Machines.	Harrison, Sullivan and Ingersol.	Compressed air.	J-2 S-4 H-5 11
Metcalf.	Mule.	Drift.	Pick.			
Nellie.	Mule.	Slope.	Pick.			
Narrona No. 1.	Mule and rope.	Drift.	Pick.			
Narrona No. 2.	Mule and rope.	Drift.	Machines.	Sullivan.	Compressed air.	8
Oak Ridge No. 2.	Mule and rope.	Drift.	Machines.	Sullivan.	Compressed air.	8
Oak Ridge No. 3.	Mule and rope.	Drift.	Machines.	Sullivan.	Compressed air.	8
Pine Run No. 1.	Mule.	Drift.	Pick.			
Pine Run No. 2.	Mule.	Drift.	Pick.			
Penn.	Mule.	Drift.	Pick.			
Pardue.	Mule.	Drift.	Pick.			
Plum Creek.	Mule & S. locomotive.	Drift.	Pick.			
Riverview (A.).	Mule and rope.	Drift.	Pick.			
Riverview (W.).	Mule.	Drift.	Pick.			
Rock Point.	Mule.	Drift.	Pick.			
Rathmel.	Mule and rope.	Drift.	Machines.	Sullivan.	Compressed air.	6
Roxle.	Mule.	Drift.	Pick.			
Roaring Run.	Mule.	Drift.	Pick.			
Sterling (B.).	Mule and rope.	Drift.	Pick.	Harrison and Ingersol.	Compressed air.	I-2 H-7 9

Sterling (C.), .....	Mule, .....	Drift, .....	Pick, .....	Jeffrey, .....	Electricity, .....	2
Sligo, .....	Mule and rope, .....	Drift, .....	Pick, .....			
State, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Staten, .....	Mule and rope, .....	Slope, .....	Pick, .....			
Staten, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Stage, .....	Mule and rope, .....	Slope, .....	Pick, .....			
Stonewall, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Sherwood, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Soldier No. 1, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Soldier No. 2, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Standard (C.), .....	Mule, .....	Drift, .....	Pick, .....			
Standard (B.), .....	Mule, .....	Drift, .....	Pick, .....			
Sandy Creek, .....	Mule & S. locomotive, .....	Drift, .....	Pick, .....			
Sharon No. 1, .....	Mule, .....	Drift, .....	Pick, .....			
Sharon No. 2, .....	Mule, .....	Drift, .....	Pick, .....			
Sharon No. 3, .....	Mule, .....	Drift, .....	Pick, .....			
Sharon No. 4, .....	Mule, .....	Drift, .....	Pick, .....			
Thompson Run, .....	Mule and rope, .....	Drift, .....	Pick, .....			
Virginia, .....	Mule and rope, .....	Drift, .....	Pick, .....			
West Penn, .....	Mule, .....	Drift, .....	Pick, .....			
Wahlville, .....	Miners push coal out to shaft, .....	Shaft, .....	Pick, .....			
Valley, .....	Mule, .....	Drift, .....	Pick, .....			

NOTE—Number of tons of coal produced by mining machines, ..... 1,732.124  
 Number of machines using compressed air for power, ..... 196  
 Number of machines using electricity for power, ..... 13  
 Number of Harrison machines, ..... 133  
 Number of Sullivan machines, ..... 68  
 Number of Ingersoll machines, ..... 15  
 Number of Jeffrey machines, ..... 12  
 Number of Morgan-Gardner machines, ..... 1  
 Highest seam of coal where machines are used about 6½ feet.  
 Lowest seam of coal where machines are used about 2 feet 10 inches

TABLE—Showing the method of ventilation, cubic feet of air per minute for each ventilating power, number of air splits, cubic feet of air for each split and cubic feet of air for each employe in the respective collieries of the Third Bituminous Mine District.

Name of Colliery.	Method of ventilation.	Diameter of fan in feet.	Size of furnace.	Capacity in cubic feet of air per minute of each fan or furnace.	Number of splits.	Number of cubic feet of air in each split.	Number of cubic feet of air per minute supplied to each employe.
Acme, .....	Furnace, .....		6x4	10,500	1	10,500	291
Aladdin, .....	Furnace, .....		6x4	18,000	1	18,000	450
Avonmore, .....	Fan, .....	16		50,000	2	20,000	644
Anderson Run, .....	Furnace, .....		5x3½	8,400	1	8,400	145
Avondale, .....	Furnace, .....		6x4	6,480	1	6,480	144
Annandale, .....							
Allegheny, .....							
Beale, .....	Furnace, .....		5x4	12,300	1	12,300	181
Butts Cannel, .....	Fan, .....	8		15,000	2	5,000	1,000
Bagdad, .....	Furnace, .....		5x3½	10,200	1	10,200	273
Beaver No. 2, .....	Fan, .....	8		18,000	2	8,000	440
Bloomington, .....	Fan, .....	10		24,000	3	6,000	100
Blackstone, .....	Fan, .....	12		25,200	2	6,000	500
Brady's Bend, .....	Furnace, .....		6x3½	7,350	2	12,000	545
Braeburn, .....	Fan, .....	4		15,000	1	12,000	308
Brackenridge, .....	Furnace, .....		6x4	15,000	1	13,200	340
Cherry Run, .....	Furnace, .....		5x3	4,400	1	2,350	156
Catfish Run, .....	Furnace, .....		6x4	7,200	1	5,000	133
Clayton, .....	Furnace, .....		4x3	1,500	1	15,000	600
Carver, .....	Fan, .....	10		11,400	2	3,400	226
Carrier, .....	Fan, .....	1		10,000	1	8,000	320
Cowansville, .....	Furnace, .....		8x4	8,000	1	10,000	208
Crag Dell, .....	Furnace, .....		6x4	8,700	1	8,000	200
Cornell, .....	Fan, .....	12		18,000	1	8,700	122
Cheswick, .....						18,000	670
Diamond No. 1, .....	Fan, .....	10		15,000	2	7,000	140
Diamond No. 2, .....	Fan, .....	10		10,500	1	8,000	123
Diamond, .....	Furnace, .....		6x4	8,000	1	10,500	124
Davidson, .....	Furnace, .....		6x4	3,000	1	8,000	160
Darlington, .....	Furnace, .....		4x3	4,000	1	3,000	250
Enterprise (M.), .....	Fan, .....	6		8,750	2	4,000	400
Enterprise (B.), .....						1,750	53
Eagle, .....	Furnace, .....		6x4	6,600	1	7,000	160
Excelsior No. 3, .....	Furnace, .....		6x4	6,500	1	6,600	110
Fairmount No. 1, .....	(2) fans, .....	6		17,500	2	6,500	216
Fairmount No. 2, .....	Fan, .....	6		10,700	1	9,500	151
Fairmount No. 4, .....	Fan, .....	8		20,100	4	8,000	133
Gilpin, .....	Furnace, .....		7x5	20,000	2	10,700	153
Grant, .....	Fan, .....	12		10,000	1	5,000	100
Glenshaw, .....	Fan, .....	12		10,700	2	4,000	80
Hoytdale, .....	Furnace, .....		6x3½	3,700	1	5,100	102
Haddon, .....	Furnace, .....		5x3½	7,800	1	6,000	120
Hill, .....	Fan, .....	10		19,450	2	10,000	206
Hickory, .....	Fan, .....	10		10,000	1	10,000	166
Hamilton, .....	Two fans, .....	6		33,000	3	5,700	142
Hillville, .....	Furnace, .....					5,000	100
Hiltes, .....	Fan, .....			35,000	2	8,250	431
Johnetta, .....	Fan, .....	4		26,000	5	11,200	219
Kerr No. 1, .....	Furnace, .....		4½x3	3,000	1	10,000	227

## Ventilation—Continued.

Name of Colliery.	Method of ventilation.	Diameter of fan in feet.	Size of furnace.	Capacity in cubic feet of air per minute of each fan or furnace.	Number of splits.	Number of cubic feet of air in each split.	Number of cubic feet of air per minute supplied to each employe.
Kerr No. 8, .....	Furnace, .....		7½x4	12,000	3	{ 5,000 4,000 3,000	250 210 273
Kirkpatrick, .....	Furnace, .....		5x4	14,500	1	14,500	725
Keystone (C), .....	Furnace, .....		6x3½	5,500	1	5,500	220
Keystone No. 1 (B.), .....	Fan, .....	8		7,000	1	7,000	103
Keystone No. 2 (B.), .....	Furnace, .....		6x4	4,000	1	4,000	571
Key or "K," .....							
Lucas, .....							
Monarch, .....	Fan, .....			11,500	1	11,500	205
Mosgrove, .....	Furnace, .....		6x4	9,000	2	{ 8,000 1,000	114 100
Monterey, .....	Furnace, .....		6x4	7,300	2	{ 4,000 3,300	114 112
Mizener, .....	Furnace, .....						
Maplewood, .....	Fan, .....	6		20,000	2	{ 12,000 8,000	174 123
Metcalf, .....	Furnace, .....		7x				
Nellie, .....	Fan, .....	10		16,000	1	16,000	1,000
Natrona No. 1, .....	Fan, .....	16		18,000	2	{ 13,500 4,500	200 180
Natrona No. 2, .....	Fan, .....	12		27,000	1	27,000	386
Oak Ridge No. 3, .....	Fan, .....	6		13,650	2	{ 9,650 4,000	161 169
Oak Ridge No. 5, .....	Furnace, .....	6		11,500	2	{ 6,500 5,000	158 250
Pine Run No. 1, .....	Furnace, .....		7x5	24,000	2	{ 11,500 3,900	575 177
Pine Run No. 2, .....	Furnace, .....		4x3	3,900			
Penn, .....	Furnace, .....		4x3	3,000	2	{ 2,000 1,000	125 100
Pardoe, .....	Fan, .....	10		25,000	2	{ 15,000 10,000	214 200
Plum Creek, .....	Furnace, .....		12x5	35,000	6	{ 8,000 8,100 4,500	160 325 180
Riverview, .....	Furnace, .....					{ 5,400 4,000 5,000	216 266 333
Riverview, .....	Furnace, .....		7x5	20,000	2	10,000	232
Riverview, .....	Fan, .....	16		15,400	1	15,400	303
Rock Point, .....	Furnace, .....						220
Rathmel, .....	Fan, .....	6		13,800	2	{ 7,400 6,400	114 98
Royle, .....	Furnace, .....		4½x3½	3,000	1	3,000	181
Roaring Run, .....	Furnace, .....		6x4	7,300	1	7,300	270
Sterling (B.), .....	Furnace, .....	10		13,500	1	13,500	241
Sterling (C.), .....	Furnace, .....		5x3½	7,500	1	7,500	167
Sligo, .....	Furnace, .....		6x4	8,400	1	8,400	233
State Line, .....	Fan, .....	12		45,000	3	{ 20,000 15,000 10,000	444 429 400
Sherwin, .....	Fan, .....	10		12,000	1	12,000	240
Stone, .....	Furnace, .....		5x4	6,300	1	6,300	140
Stoneboro No. 3, .....	Fan, .....	10		14,000	2	{ 8,000 6,000	90 290
Sherwood, .....	Fan, .....	6		8,400	1	8,400	233
Soldier No. 1, .....	Two fans, { 6 } { 25 }			40,000	3	{ 15,000 10,000 15,000	166 180 153
Soldier No. 2, .....	Fan, .....	25		55,000	4	{ 24,000 15,000 10,000 6,000	212 156 117 162
Standard (C.), .....							
Standard (B.), .....	Furnace, .....		5x3½	5,380		5,380	141
Sandy Creek, .....	Furnace, .....			18,000			
Sharon No. 1, .....	Fan, .....	10					
Sharon No. 2, .....							
Sharon No. 3, .....							
Sharon No. 4, .....							



## Ventilation—Continued.

Name of Colliery.	Method of ventilation.	Diameter of fan in feet.	Size of furnace.	Capacity in cubic feet of air per minute of each fan or furnace.	Number of splits.	Number of cubic feet of air in each split.	Number of cubic feet of air per minute supplied to each employee.
Thompson Run, .....	Fan, .....	6 .....	.....	10,880	2	{ 8,000 2,880	{ 118 411
Virginia, .....	Fan, .....	6 .....	.....	26,000	3	{ 10,000 8,000 8,000	{ 166 204 266
West Penn. ....	Furnace, ..	.....	.....	18,000	2	{ 9,000 9,000	{ 409 409
Wahlville, .....	Furnace, ..	.....	5x3	4,000	1	{ 4,000	{ 114
Creighton, .....	Fan, .....	20 .....	.....	20,000	1	{ 20,000	{ 631

## Names of Persons Granted Certificates of Competency of First and Second Grade Since May 5, 1893.

First grade certificates: C. H. Oakes and Harry L. Phythyon.

Second grade certificates: Alexander M. Oliver, William T. Lace, George H. Summers, John L. McNamee, Arthur V. Berry, Edward Flinn, W. G. Crawford, James Gould, H. N. McKallip, Archibald Lafferty, James Robertson, P. J. Skehan, Jacob Ashman, John Bowie, W. C. Mahood, Robert Briggs, Archie Maxwell, Nicholas Smith, John H. Young, John J. Shuttleworth, Thomas R. Wilson, Thomas Bolam, George E. Ashman, Charles W. Briggs, M. I. Bigleg, John F. Eden, Joseph H. Gray, Peter Hay, Ralph Hanford, Lewis D. Lewis, William Paterson, H. H. Moody, Alex. Skinner and Samuel Sherwin.

## Descriptions of New Mines Opened During the Year 1901.

Bagdad mine is operated by the Bagdad Coal and Coke Company and is located on the West Penn Railroad, Armstrong county. This is a drift opening in which operations commenced in May. The Upper Freeport coal seam is being worked, and the product lowered from the opening to the tipple over an inclined plane 187 feet long. The mine will be worked on the single entry plan, and a small furnace has been built to ventilate it.

Cheswick mine is a shaft opening, twenty-one feet by nine and one-fourth feet and 216 feet deep. The shaft is sunk to the Lower Freeport seam which is seven and one-half feet thick, there is a slate binder nine inches thick in the center of it. The shaft is about one and one-half miles from the West Penn Railroad near Cheswick, Allegheny county, and is operated by the Allegheny Coal Company. An air shaft has been sunk two hundred feet from the main one which is ten feet by twelve feet in size. The surface water has

been prevented from getting into the shafts by concrete work. The concrete which is bedded into the solid rock reaches all around the shafts to a depth of fifteen feet and is four feet wide at the main shaft and thirty inches wide at the air shaft. A pair of engines each 22"x44" manufactured by Webster, Camp & Lane of Akron, Ohio, also cone drums, have been placed in position. One Norwalk air compressor to furnish air with which to operate mining machines, four Erie tube boilers 150 H. P. each, to furnish steam. A Boyd-Porter steam pump with eight inch suction and six inch discharge; a twelve foot diameter by eight feet wide Capell fan to produce ventilation, and a modern steel tippie is being erected which will make a very modern and substantial mining plant.

The company has built twelve blocks (two houses to a block with three rooms to each house), also four blocks of eight rooms (each having two houses with four rooms to a house and eight single houses with four rooms each, all of which are for the use of the employes. The shafts have been sunk on the bottom land in a narrow valley with hills on both sides of it over one hundred feet in height, giving a covering to the coal seam of at least 300 feet in depth.

Creighton mine is a drift opening situated on the West Penn Railroad at Creighton, Allegheny county, and operated by the Pittsburg Plate Glass Company. The mine is opened on the Lower Freeport seam, which is about six feet thick. The seam has a slate band ten inches thick in the center of it. The plan adopted for working the coal is that of double entry, and pillar and room. The coal is being mined by Jeffrey mining machines with electricity as the power. A Guibal fan twenty feet in diameter and six and one-fourth feet wide has been erected for ventilating purposes. The fan running at twenty-four revolutions was producing 20,000 cubic feet of air per minute.

Allegheny mine is a drift opening situated on the West Penn Railroad operated by the Allegheny Coal and Coke Company. The product from this mine will be used at the Steel Works which are located near it. At the time of my visit there were only a few miners employed, and the ventilating arrangements were not completed.

Cornell mine is a slope opening situated on the West Penn Railroad in Allegheny county, operated by the Cornell Coal Company. It is opened on the Lower Freeport coal seam. The double entry plan of working out the coal has been adopted. There is a small quantity of explosive gas produced in the mine. A twelve foot diameter fan (Brazil type) is used for ventilation, which produced 18,000 cubic feet of air per minute.

Ambandale drift has been opened on a Cannel coal seam of about thirty inches in thickness. The mine is situated on the Hilliard Branch of the Bessemer and Lake Erie Railroad, in Butler county.

The opening is connected with the tippie by an inclined plane 1,300 feet in length. The outside structures have all been very substantially built. The interior workings of the mine are in very fair condition, although the ventilating arrangements have not been completed yet.

Wahlville mine is a shallow shaft opening, situated near Evans City, Butler county. It is operated by the Wahlville Coal Company, Limited. A new shaft has just been sunk to take the place of the one now being used. It is thirteen feet by nine feet in size, and fifty feet deep. The coal seam is about three feet high, and as the roof is not being ripped down nor the floor taken up, the traveling ways and hauling roads are very low, but as soon as the hoisting arrangements are completed at the new shaft, the roof along the hauling roads will be shot down, which will increase the height. The miners at present push the coal in small wagons to the bottom of the shaft. The mine is ventilated by means of a small furnace. I measured about 5,400 cubic feet of air in circulation and the mine is in very fair condition.

Buhl Nos. 3 and 4 mines are drift openings. I did not visit these mines as the railroad to them is not yet completed. They will be operated by the Sharon Coal and Limestone Company.

Buhl No. 2 mine is a shaft opening seventy-eight feet deep and eighteen feet by eight feet (inside of timbers) in size, and is on the "A" or Brookville seam, which is four feet in thickness. At the time of my visit the workmen were busy cutting out the shaft bottom, and making room for the partings, etc. This operation is located on a new branch railroad of the Western New York and Pennsylvania Railroad of the Pennsylvania Company in Lawrence county. It is operated by the Sharon Coal and Limestone Company.

Buhl No. 1 mine is located on the same railroad as that of No. 2 mine, but is in Mercer county. The Sharon Coal and Limestone Company operates it. This is a shaft opening 115 feet deep and 18'x8' in size, and is on the "A" or Brookville coal seam from three feet six inches to four feet in thickness. The coal is hoisted by Duplex engines with cylinders 12"x18". An automatic dumping cage has also been erected. The shaft head frame is about sixty feet high and it is built in a substantial manner. The ventilation is produced by a Brazil fan ten feet in diameter. Mine in good condition.

The "K" mine which is operated by Filer Brothers is a drift, on the "A" or Brookville coal seam, which is about five feet six inches in height. The mine is situated on the Bessemer and Lake Erie Railroad at Pardoe, Mercer county. The method of working out the coal is the single entry plan. The ventilating air shaft has been sunk, but the ventilating fan had not been erected at the date of my last visit. The volume of air circulating in the mine was not sufficient.



The Roaring Run mine is a drift opening, situated on the West Penn Railroad, operated by the Roaring Run Coal and Coke Company. The opening is connected with the tippie by an inclined plane. The coal is the Upper Freeport seam which is about three feet six inches in height. The mine is worked partially on the double entry plan. A six foot furnace produces the ventilation. The mine was in very fair condition. I measured 9,200 cubic feet of air per minute.

The Pine Run No. 2 mine is a new drift opening operated by the Pine Run Coal and Coke Company, situated on the West Penn Railroad in Westmoreland county. The mine is ventilated by a small furnace.

The Valley mine is a drift opening situated on the West Penn Railroad in Westmoreland county, and is operated by the Valley Coal Company. No coal had been shipped up to the end of the year 1901, but will begin shipping coal during the month of January, 1902.

Anderson Run mine was opened during the year, and began to ship coal April 16, 1901. This drift opening is situated on the Low Grade Division of the Buffalo and Allegheny Valley Railroad in Jefferson county. The distance between the mine opening and the tippie is one and one-half miles, and a fifteen ton steam locomotive brings the coal forward to the tippie. The grades (at some points as high as ten per cent.) on this locomotive road are very heavy. The Lower Freeport seam is being mined and the coal is being worked out on the double entry plan. The ventilation is produced by a six foot furnace and I measured 8,400 cubic feet of air circulating through the working places of the mine.

The Davidson mine situated at Beaver Falls, Beaver county, is an old opening which has not been operated under the mining law for years, but the lawful number of miners are employed in it now.

The Acme mine after being idle for some years and which was stricken from the list of active mines, has again resumed operations under the control of a different company, known as the Acme Coal Mining Company. Since the new company have taken charge of the property extensive improvements have been made in the interior of the mine.

Hillville mine is situated on the Buffalo and Allegheny Valley Railroad in Clarion county, and is operated by the Hillville Coal and Mining Company. The coal from this drift opening is conveyed to the tippie over two inclined planes. A ventilating shaft sixty feet deep and seven feet in diameter has been sunk, but the ventilating furnace had not been built at the time of my visit.

#### Description of Old Mines Situated in Allegheny County on the P. & W. and West Penn Railroads.

Glenshaw mine was not ventilated as well as it should have been. I measured 10,700 cubic feet of air in circulation in the mine, which

was split into two currents about equally divided, which was inefficient, not being strong enough at the face of the workings.

In the Hites mine I measured 33,000 cubic feet of air, which was ample had it been properly distributed to the face of the workings. Some of the air currents were so weakened by leakage before they reached the face of the entries that their velocity was too much reduced to afford efficient ventilation. Explosive gas is being produced in small quantities at the face of two of the entries.

At the Natrona No. 1 mine the ventilation and drainage was very good, and I measured 24,000 cubic feet of air per minute in circulation. At the Natrona No. 2 mine I measured 27,000 cubic feet of air being produced by the ventilator but there was practically no circulation at the face of the interior workings. Since my visit I have been informed that the defects noted have all been remedied, and that the mine is now well ventilated.

The Brackenridge mine was not sufficiently ventilated at the face of the workings. There was a sufficient volume of air at the ventilating furnace but one-half of it was lost by leakage before it reached the inner portion of the mine.

#### Mines Situated on the West Penn Railroad in Butler, Armstrong and Westmoreland Counties.

Kerr No. 1 mine was not very well ventilated on last visit owing, in a large measure, to no fire being in the ventilating furnace and some of the air courses having been neglected. The mine foreman had quit the service of the company the day before my visit, which might have been the cause of no fire being in the furnace. The other mines, Kerr No. 8, Avonmore, Beale, Haddon, Gilpin, Blackstone, Kirkpatrick, West Penn, Riverview, Pine Run No. 1, were all in splendid condition, both as regards ventilation and drainage. At the Kerr No. 8 an air shaft sixty-five feet deep has been sunk and a furnace seven and one-half feet by four feet has been built during the year. A new seven foot furnace has been built and an air shaft eighty-five feet deep has been sunk at the West Penn mine and a twelve foot diameter ventilating fan has been erected at the Blackstone mine during the year.

#### Mines Situated on the Buffalo and Allegheny Valley Railroad.

The Sandy Creek mine was not properly ventilated. The total volume of air being produced by the furnace was 18,000 cubic feet per minute. The system adopted of distributing the air to the face of the workings was very faulty. This was caused by having too many openings to day light, thereby having too many splits rendering the currents too weak for efficient ventilation.



In the Plum Creek mine I measured 40,800 cubic feet of air per minute in circulation, which was sufficient, but owing to the mine having so many openings to the surface the mine foreman had not proper control of the different air currents, hence the distribution of the air was defective.

At the Lucesco mine the ventilation was not very good, owing to no ventilating power having been provided yet. The company has agreed to erect a fan at this mine at once, so as to have it ventilated according to law.

At the Riverview mine although there was an abundance of air being produced by the fan, it had been somewhat neglected by the mine foreman and as a result the mine was not as well ventilated as it should have been. Also the Eagle mine was not as efficiently ventilated as it should have been. The other mines, viz: Crag Dell, Braeburn, Metcalf, Aladdin, Johnetta, Mosgrove, Monarch, Bradys Bend, Catfish Run and Monterey, were in very good condition. They were well ventilated and drained. At the Johnetta mine a new four foot Capell fan has been erected. The fan is driven by electricity. Two electric motors haul the coal from the workings to the tippie. At the Mosgrove mine a new tippie, Mitchell dump and a double tracked inclined plane have been built during the year.

#### Mines Situated Along the Low Grade Division and Sligo Branch of the Buffalo and Allegheny Valley Railroad.

The Carrier, Oak Ridge Nos. 3 and 5, Avondale, Diamond, Sligo, Sterling and Fairmount No. 4 mines were reasonably well ventilated and drained. At the Cherry Run mine the air current was not strong enough at the face of some of the entries. The Standard mine was insufficiently ventilated, but the officials promised to erect a ventilating fan or furnace without delay. At my last visit to the Fairmount mines especially Nos. 1 and 2, the air in circulation in the workings was not adequate, but since I last inspected them an opening has been made to day light at the extreme end of the workings in No. 1 mine, which has improved the ventilation wonderfully as I am informed.

#### Mines Situated in the Reynoldsville Region.

The Bloomington, Virginia, Hamilton and Rathmel were reasonably well ventilated and drained. The drainage at the face of some of the workings in Sherwood mine was poor. The ventilating currents had not sufficient velocity at the face of the workings in the Maplewood mine. The Soldier Nos. 1 and 2 mines, with the exceptions of a few entries, were reasonably well ventilated,

### Mines Situated in Beaver and Lawrence Counties.

The Beaver No. 2, Excelsior No. 3, Thompson Run, Clayton and Butts Cannel mines were all in good condition when I last inspected them. At the Rock Point mine all of the coal has been exhausted, but a new drift mine has been opened on a new property near the exhausted one. The ventilation in the new works was not very good owing to the ventilating power not having been erected. The air shaft was sunk at my last visit and a furnace has been built since I made my last inspection. Little or no work has been done at the State Line and Sterling mines during the year owing to a protracted strike among the miners, hence the mines have not been examined during the year. A new haulage plant (rope system) with gasoline as the power has been installed at the Thompson Run mine during the year.

### Mines Located Along the Bessemer and Lake Erie Railroad and in Other Parts of Mercer and Butler Counties.

The Enterprise mine in Butler county, Sherwin, Grant, Stage, Mizener, Nellie, Royle, Pardon, Hill, Hickory, Carver, Diamond Nos. 1 and 2, and Stoneboro No. 3 mines were all fairly well ventilated, except that the air currents in Nos. 1 and 2 Diamond were too weak at some of the workings. A new air shaft has been sunk at the face of the workings of the Pardoe mine. A good stairway has been placed in this shaft for the miners. The Enterprise mine in Mercer county was not sufficiently ventilated at the face of the workings. The drainage was defective, but a deep ditch is being cut from the bottom of the shaft to near the face of the workings so as to relieve them of a large body of water produced there. At the Grant mine a twelve foot diameter fan has been erected during the year.

TABLE I—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Third Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Acme Coal Mining Co.	Clarion,	H. C. Burket,	Greensburg,	J. P. Woodmansee,	Rimersburg,	Sligo Branch of L. G. Div. of L. & A. V.
Acme,						
Avondale Mining & Mfg. Co.	Clarion,	H. C. Burket,	Greensburg,	J. P. Woodmansee,	Rimersburg,	Low Grade Div. of Buffalo & Allegheny Valley.
Avondale,						
Joseph G. Beale,	Armstrong,	Jos. G. Beale,	Leechburg,	E. H. Beale,	Leechburg,	Buffalo & Allegheny Valley.
Aladdin,						
Straightwell, Hibbard & Co.	Jefferson,			D. M. Straightwell,	Camp Run,	Buffalo & Allegheny Valley.
Anderson Run,						
Avonmore Coal & Coke Co.	Armstrong,			L. W. Hicks,	Leechburg,	West Penn.
Avonmore,						
Allegheny Coal & Coke Co.	Allegheny,	N. S. Hicks,		Robt. D. Crawford,	Leechburg,	West Penn.
Avenue,						
Butts Cannel Coal Co.	Beaver,			George Gould,	E. Palestine, O.,	P. Ft. Wayne & Chicago.
Butts-Cannel,	Butler,			George Gould,	E. Palestine, O.,	Hilliard Branch of Bessemer & Lake Erie.
Annandale,						
Keystone Coal Mining Co.	Armstrong,	Geo. E. Henry,	East Brady,	John Henry,	East Brady,	Buffalo & Allegheny Valley.
Brady's Bend,	Clarion,	Geo. E. Henry,	East Brady,	John Henry,	East Brady,	Sligo Branch of L. G. Div. of B. & A. V.
Keystone,						
Jos. G. Beale & Co.	Armstrong,	Jos. G. Beale,	Leechburg,	Harry W. Beale,	Leechburg,	West Penn.
Beale,						
Braeburn Steel Co.	Westmoreland,			Wm. Beane,	Braeburn,	Buffalo & Allegheny Valley.
Braeburn,						
Sharon Coal & Limestone Company.	Mercer,	F. P. Filer,	Mercer,	Peter Hay,	Volant,	W. N. Y. & P.
Buhl No. 1,						
Buhl No. 2,	Lawrence,	F. P. Filer,	Mercer,	C. H. Oakes,	Leesburg,	W. N. Y. & P.
Buhl No. 3,	Butler,	F. P. Filer,	Mercer,	M. W. Jenkins,	Grove City,	W. N. Y. & P.
Buhl No. 4,	Butler,	F. P. Filer,	Mercer,	M. W. Jenkins,	Grove City,	W. N. Y. & P.

TABLE I—Continued.

Names of Operators and Culleries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Brackenridge Coal Co.	Allegheny.	N. S. Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.
Brackenridge.	Lawrence.	.....	.....	H. K. Hartsuff, Jr.	Wampum.	Erie and Pittsburg.
Beaver Coal and Coke Co.	Westmoreland.	Alfred Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.
Beaver No. 2.	Armstrong.	Alfred Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.
Lewis Coal Company.	Jefferson.	Alex. Dunsmore.	Glen Ritchey.	George Snedden.	Rathmel.	Falls Creek & Reynoldsville R.
Blackstone.	Allegheny.	J. I. Johnston.	Charleroi.	J. K. Johnston.	Charleroi.	West Penn.
Backed Coal and Coke Co.	Clarion.	Chas. Andrews.	Elmira, N. Y.	E. N. Miller.	Huey.	Sligo Branch of L. G. Div. of E. & A. V.
Bagdad.	Mercer.	Robt. P. Cann.	Stoneboro.	George Young.	Stoneboro.	L. S. & M. S.
Peale, Peacock & Kerr, Inc.	Beaver.	.....	.....	W. F. Clayton.	Beaver Falls.	.....
Bloomington No. 9.	Armstrong.	.....	.....	Anthony Smith.	Cowansville.	B. R. & P.
Pittsburg Plate Glass Co.	Westmoreland.	B. F. Sprankle.	Tarentum.	H. W. Boyd.	Tarentum.	Buffalo & Allegheny Valley.
Creighton.	Jefferson.	.....	.....	C. E. Carrier.	Summerville.	Low Grade Div. of Buffalo & A. V.
Cherry Run Mining Co.	Clarion.	C. J. McTighe.	Catfish.	C. J. McTighe.	Catfish.	Buffalo & Allegheny Valley.
Cherry Run.	Allegheny.	.....	.....	W. A. Iseman.	Hite.	West Penn.
Carver Coal Company.	.....	.....	.....	.....	.....	.....
W. F. Clayton.	.....	.....	.....	.....	.....	.....
Cowansville Mining Co.	.....	.....	.....	.....	.....	.....
Cowansville.	.....	.....	.....	.....	.....	.....
Hamilton Coal Mining Co.	.....	.....	.....	.....	.....	.....
Crag Dell.	.....	.....	.....	.....	.....	.....
Carrier Brothers.	.....	.....	.....	.....	.....	.....
Carrier.	.....	.....	.....	.....	.....	.....
Catfish Run Coal Co.	.....	.....	.....	.....	.....	.....
Catfish Run.	.....	.....	.....	.....	.....	.....
Cornell Coal Company.	.....	.....	.....	.....	.....	.....
Cornell.	.....	.....	.....	.....	.....	.....

Filer, Sutliff & Co. Diamond No. 1.	Mercer, Mercer.	Enoch Filer, Enoch Filer.	Sharon, Sharon.	F. F. Filer, F. F. Filer.	Mercer, Mercer.	Bessemer & Lake Erie. Bessemer & Lake Erie.
J. W. Ganoe. Diamond.	Clarion.			J. W. Ganoe.	Phillipston.	Sligo Branch of Low Grade Div. of B. & A. V.
Addison Davidson. Davidson.	Beaver.			Addison Davidson.	Beaver Falls.	
Darlington Brick & Mining Company. Darlington.	Beaver.			J. H. Warwood.	Darlington.	Pitts., Marion & Chicago Ry.
Jos. & M. A. Lehnor. East.	Clarion.			Joseph Lehnor.	East Brady.	Buffalo & Allegheny Valley.
Wampum Iron Coal Co. Excelsior No. 3.	Lawrence.	Matthew Gunton.	Wampum.	Chas. M. Harvey.	Wampum.	Erie & Pittsburg.
P. D. Sherwin. Enterprise. Sherwin.	Butler.	P. D. Sherwin. P. D. Sherwin.	Karns City. Karns City.	Samuel Sherwin.	Sherwin.	P. & W. Bessemer & Lake Erie.
Grove Coal Company. Enterprise.	Mercer.	J. V. Morris.	Cleveland, O.	D. D. Morris.	Grove City.	Bessemer & Lake Erie.
Fairmount Coal Co. Fairmount No. 1.	Armstrong.	E. C. Roberts.	Buffalo, N. Y.	S. Tagtor Sheaffer.	New Bethlehem.	Low Grade Div. of Buffalo & Allegheny Valley.
Fairmount No. 2.	Armstrong.	E. C. Roberts.	Buffalo, N. Y.	S. Tagtor Sheaffer.	New Bethlehem.	Low Grade Div. of Buffalo & Allegheny Valley.
Fairmount No. 4.	Armstrong.	E. C. Roberts.	Buffalo, N. Y.	S. Tagtor Sheaffer.	New Bethlehem.	Low Grade Div. of Buffalo & Allegheny Valley.
Freeport Coal Co. Freeport.	Allegheny.			N. S. Hicks.	Leechburg.	West Penn.
F. A. Mizener. Grant.	Butler.					Bessemer & Lake Erie. Bessemer & Lake Erie.
Gilpin Coal Company. Gilpin.	Armstrong.			N. S. Hicks.	Leechburg.	West Penn.
Pittsburg Coal Co. Glenshaw.	Allegheny.	Geo. W. Schluenderberg.	Pittsburgh.			P. & W.
Haddon Coal Company. Haddon.	Armstrong.	Alfred Hicks.	Leechburg.	N. S. Hicks.	Leechburg.	West Penn.



TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Jefferson, Clearfield Coal and Iron Co.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
Hamilton.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
Schiller No. 1.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
Maplewood.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
Rathnel.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
Sherwood.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
Virginia.	Jefferson.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	Falls Creek and Reynoldsville R. R.
McFetridge Brothers.	Allegheny.			G. H. McFetridge.	Hites.	West Penn.
Hites or McFetridge Bros. No. 1.	Allegheny.			G. H. McFetridge.	Hites.	West Penn.
Hites or McFetridge Bros. No. 2.	Allegheny.					
Hill Coal Company, Limited, Hill.	Mercer.			William Jenkins.	Jackson Centre.	W. N. Y. & P.
Hillsville Coal & Mining Co. Hillsville.	Clarion.			P. A. Stewart.	West Monterey.	Buffalo & Allegheny Valley.
Hoydale Coal Co. Hoydale.	Beaver.			F. S. Hoyt.	New Castle.	Erie & Pittsburgh.
Hickory Coal Co. Limited, Hickory.	Mercer.	Joseph Davis.	Youngstown, O.	Hugh Evans.	Bowle.	W. N. Y. & P.
Pittsburg & Buffalo Co. Johnetta.	Armstrong.	Harry P. Jones.	Johnetta.	John Phillips.	Johnetta.	Buffalo & Allegheny Valley.
Pard & Coal Company, "K."	Mercer.			E. L. Filer.	Pardee.	Bessemer & Lake Erie.
Turner Coal, Coke & Mining Co.						
Keystone Nos 1 and 2.	Butler.	J. L. Turner.	Ferris.			Hilliard Branch of Bessemer & Lake Erie.

American Sheet Steel Co. Kirkpatrick, .....	Armstrong, .....	S. A. Davis, .....	Vandergrift, ..	Oscar Lenquest, ..	Leechburg, .....	
Kerr Coal Co. Kerr No. 1, .....	Armstrong, .....	G. B. Findley, ..	Freeport, .....	M. C. Kerr, .....	Freeport, .....	West Penn.
Kerr No. 2, .....	Butler, .....	G. B. Findley, ..	Freeport, .....	M. C. Kerr, .....	Freeport, .....	
Lucas Coal Co. Lucas, .....	Westmoreland, ..	.....	.....	J. H. Patton, .....	Greensburg, ....	Buffalo & Allegheny Valley.
Ben Franklin Coal Co. McCauley, .....	Westmoreland, ..	G. B. Findley, ..	Freeport, .....	M. C. Kerr, .....	Freeport, .....	Buffalo & Allegheny Valley.
Monarch, .....	Clarion, .....	.....	.....	C. P. McCafferty, ..	East Brady, .....	Buffalo & Allegheny Valley.
Mosgrove Coal Works. Mosgrove, .....	Armstrong, .....	.....	.....	Wm. L. Affelden, ..	Mosgrove, .....	Buffalo & Allegheny Valley.
Monterey Coal Co. Monterey, .....	Clarion, .....	.....	.....	A. J. Watson, .....	West Monterey, ..	Buffalo & Allegheny Valley.
Penna. Salt Mfr. Co., Natrona Nos. 1 and 2, .....	Allegheny, .....	E. E. Armstrong, ..	Natrona, .....	James Boustead, ..	Natrona, .....	West Penn.
Nellie Coal Co. Nellie, .....	Butler, .....	.....	.....	C. B. McFarland, ..	Argentine, .....	Hilliard Branch of Bessemer & Lake Erie.
Oak Ridge Mining Co. Oak Ridge Nos. 3 and 5, ..	Armstrong, .....	.....	.....	Henry Williams, ..	Oak Ridge, .....	Low Grade Div. of Buffalo & Allegheny Valley.
N. Y. & Cleveland Gas Coal Co. Plum Creek, .....	Allegheny, .....	.....	.....	Hugh Dunning, ..	Unity, .....	Plum Creek Branch of Buffalo & A. V.
Sandy Creek, .....	Allegheny, .....	.....	.....	Wm. Fisher, .....	White Ash, .....	Sandy Creek Branch of Buffalo & A. V.
Filer Brothers. Pardoe, .....	Mercer, .....	.....	.....	E. L. Filer, .....	Pardoe, .....	Bessemer & Lake Erie.
Pine Run Coal & Coke Co. Pine Run Nos. 1 and 2, .....	Westmoreland, ..	.....	.....	L. W. Hicks, .....	Leechburg, .....	West Penn.
Penn. Coal Co. Penn., .....	Lawrence, .....	Edwin N. Ohl, .....	New Castle, .....	.....	.....	W. N. Y. & P.
Rearing Run Coal & Coke Company. Rearing Run, .....	Westmoreland, ..	J. L. McKeever, ..	Irwin, .....	John S. McKeeve, ..	Apollo, .....	West Penn.
Leechburg Coal & Coke Co. Riverside, .....	Westmoreland, ..	Alfred Hicks, .....	Leechburg, .....	N. S. Hicks, .....	Leechburg, .....	West Penn.
Bonnelly, Dunham & Co. River View, .....	Armstrong, .....	W. J. Dunham, ..	Buffalo, N. Y., ..	John Doyle, .....	Cosmus, .....	Buffalo & Allegheny Valley.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Super- intendent.	P. O. Address.	Railroad to Mine.
Boyle Coal Co. Royle, .....	Butler, .....	.....	.....	R. E. Royle, .....	Hilliard, .....	Hilliard Branch of Bessemer & Lake Erie.
George E. Taper, Rock Point, .....	Lawrence, .....	.....	.....	Wm. Brown, .....	Wampum, .....	P. & W.
George G. Stage, Stage, .....	Butler, .....	Geo. G. Stage, ....	Greenville, ....	James Welsh, ....	Coaltown, .....	Bessemer & Lake Erie.
Campbell, Lowther Coal Co. Standard, .....	Clarion, .....	Thos. S. Lowther, ..	Helvetia, .....	John D. Lowther, ..	Rimersburg, ....	Sligo Branch of L. G. Div. of B. & A. V.
Sterling Mining Co. or W. Sterling, H. Warner, ..	Beaver, .....	W. H. Warner, ....	Cleveland, O., ..	John Hileman, ....	Washingtonville, ..	Pitts., Marion & Chicago Ry.
Sterling, .....	Butler, .....	.....	.....	Harry Hamilton, ..	Argentine, .....	Hilliard Branch of Bessemer & Lake Erie.
Standard Coal Mining Co. Standard, .....	Beaver, .....	W. J. Mullins, ....	Wooster, O., ....	Hugh Laughlin, ....	East Palestine, ....	Pitts., Ft. Wayne & Chicago.
State Line Coal Co. * State Line, .....	Clarion, .....	Geo. E. Henry, ....	East Brady, ....	Peter Henry, .....	East Brady, ....	Sligo Branch of L. G. Div. of B. & A. V.
Sterling Coal Co., Sligo, .....	Clarion, .....	.....	.....	H. F. Miller, .....	Huey, .....	Sligo Branch of L. G. Div. of B. & A. V.
Mercer Iron and Coal Co. Stoneboro Nos. 2 and 3, ..	Mercer, .....	Robt. P. McCann, ..	Stoneboro, ....	B. F. Esgar, .....	Stoneboro, ....	L. S. & M. S.
Thompson Run Coal Co. Thompson Run, .....	Beaver, .....	.....	.....	F. H. Douthett, ....	Kimberly, .....	Pittsburgh & Lake Erie.
West Penn Mining Co. West Penn, .....	Westmoreland, ..	.....	.....	L. W. Hicks, ....	Loechburg, .....	West Penn.
Wahville Coal Co. Wahville Nos. 1 and 2, ....	Butler, .....	.....	.....	A. R. Wahl, .....	Evans City, .....	B. R. & P.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Third Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds dynamite used.	Number horses and mules.
Acme Coal Mining Co.	Clarion,	7,413	.....	.....	7,413	.....	.....	56	47	.....	.....	.....	.....	7
Avondale Mining and Mfg. Co.	Clarion,	37,484	.....	114	37,598	.....	.....	276	62	.....	.....	.....	.....	7
Avondale,														
Jos. G. Beale.														
Abaddin,	Armstrong,	31,762	70	100	31,872	.....	.....	207	55	.....	.....	280	170	2
Straightwell, Hibbard & Co.														
Anderson Run,	Jefferson,	24,248	150	100	24,498	.....	.....	162	87	.....	.....	300	.....	4
Avonmore Coal & Coke Co.	Armstrong,	101,394	150	.....	101,544	.....	.....	281	110	.....	2	.....	.....	9
Avonmore,														
Allegheny Coal and Coke Co.	Allegheny,	5,376	.....	.....	5,350	.....	.....	103	28	.....	.....	110	50	2
Avonue,														
Butts Cannel Coal Co.	Butler,	826	.....	.....	826	.....	.....	60	12	.....	.....	.....	.....	1
Avondale,	Beaver,	25,806	1,075	.....	26,881	.....	.....	216 25	63	.....	.....	125	.....	3
Butts Cannel shaft,														
Total,		26,632	1,075	.....	27,707	.....	.....	138.12	75	.....	.....	125	.....	4
Keystone Coal Mining Co.														
Brady's Bend,	Armstrong,	59,342	450	.....	59,792	.....	.....	250	116	.....	3	150	50	7
Keystone,	Clarion,	19,898	.....	125	20,023	.....	.....	225	39	.....	.....	50	.....	3
Total,		79,246	450	125	79,815	.....	.....	242	175	.....	3	200	50	10

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.			Number of tons used for steam and heat at col- liery.	Sold to local trade and used by employees, tons.	Total production of coal in tons.		Number of coke ovens.	Number days work d.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number bars powder used.	Number pounds dynamite used.	Number horses and mules.
		41,777	434	85	42,206	Total production of coal in tons.										
Joseph G. B. Sale and Company Beaumont, .....	Armstrong, .....	41,777	434	85	42,206	.....	.....	.....	.....	231.50	66	.....	.....	804	.....	3
Braceburn Steel Company. Braceburn, .....	Westmoreland, ..	.....	17,264	.....	17,264	.....	.....	.....	.....	308	22	.....	.....	.....	.....	3
Sharon Coal and Limestone Co. Buhl No. 1, .....	Marion, .....	2,262	1,248	417	3,868	.....	.....	.....	.....	301	34	.....	.....	165	670	2
Buhl No. 2, .....	Lawrence, .....	.....	1,043	187	1,230	.....	.....	.....	.....	185	33	.....	.....	40	250	.....
Buhl No. 3, .....	Baughman, .....	.....	.....	131	131	.....	.....	.....	.....	500	10	.....	.....	.....	50	.....
Buhl No. 4, .....	Baughman, .....	.....	.....	.....	.....	.....	.....	.....	.....	134	7	.....	.....	.....	.....	.....
Total, .....	.....	2,262	2,263	795	5,259	.....	.....	.....	.....	295	86	.....	.....	145	950	2
Brackemridge Coal Co. Brackemridge, .....	Allegheny, .....	10,000	.....	36,500	46,500	.....	.....	.....	.....	309	54	.....	.....	700	.....	4
Beaver Coal and Coke Company. Beaver No. 2, .....	Lawrence, .....	62,176	.....	3,500	65,676	.....	.....	.....	.....	273	160	.....	.....	.....	.....	7
Lewis Coal Company. Blackstone, .....	Westmoreland, ..	65,907	200	.....	66,103	.....	.....	.....	.....	258	103	.....	.....	628	.....	7
Baehad Coal and Coke Company. Baehad, .....	Armstrong, .....	13,365	.....	.....	13,365	.....	.....	.....	.....	110	32	.....	1	30	.....	2
Peale, Peacock & Kerr, Inc. Bloomington No. 9, .....	Jefferson, .....	45,298	1,500	37	46,745	.....	.....	.....	.....	108	51	.....	.....	528	12	10
Brinker Coal and Iron Company. Brinker, .....	Clarion, .....	18,000	500	.....	18,500	.....	.....	.....	.....	112	60	.....	.....	.....	.....	5



Pittsburg Plate Glass Company.		320	30	350	16	47	10
Grechen.	Allegheny.						
Cherry Run Mining Company.	Clarion.	22,270	100	22,420	170	51	1 100 200 3
Cherry Run.							
Carver Coal Company.	Mercer.	27,842	5,252	33,844	230	46	240 4
Carver.							
Clayton.	Beaver.		40	9,142	267	19	40 3
W. F. Clayton.							
Cowanville Mining Company.	Armstrong.	31,473	160	31,873	223	73	370 3
Cowanville.							
Hamilton Coal Mining Company.	Westmoreland.	18,269	200	18,569	279	25	250 4
Crags Hill.							
Carrier Brothers.	Jefferson.	20,661	250	30,061	276	70	500 2 100 7
Carrier.							
Cathush Run Coal Company.	Clarion.	14,936	40	15,026	240	35	1 110 50 6
Cathush Run.							
Cornell Coal Company.	Allegheny.	24,000	1,000	34,000	254	165	1,000 30 8
Cornell.							
Eller, Sutliff and Company.	Mercer.	101,068	4,100	116,418	961	162	700 5
Diamond No. 1.		74,241	2,600	83,191	230	131	466 5
Diamond No. 2.	Mercer.	186,300	6,700	189,679	2 0	293	1 1 6 13
Total.							
J. W. Ganoe.	Clarion.	98,527	100	98,627	136	76	240 5
Diamond.							
Adelson Davidson.	Beaver.		3,510	3,510	216	17	3 7 1
Davidson.							
Barlington Brick and Mining Co.	Beaver.		5,225	5,225	289	12	2 2
Barlington.							
Jos. and M. A. Lehnert.	Clarion.	46,908	1,352	48,260	290	80	4 4
Engle.							
Wannum Run Coal Company.	Lawrence.	41,270	50	41,510	268	110	250 200 9
Excelsior No. 3.							
P. D. Sherwin.	Butler.	36,000	175	36,525	276	60	1,500 3
Sherwin.		16,418	930	17,348	292	23	2 200 4
Emery.	Butler.		1	53,883	2 1	89	2 200 1,500 4
Total.		22,415	1				

TABLE II--Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at col- liery.	Sold to local trade and used by employees--tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds dynamite used.	Number horses and mules.
Grove Coal Company.														
Enterprise, .....	Mercer, .....	65,756	5,840	584	72,180	.....	.....	234	87	.....	.....	426	.....	6
Fairmount Coal Company.														
Fairmount No. 1, .....	Armstrong, .....	154,639	.....	254	154,913	.....	.....	274	235	1	.....	2,110	.....	20
Fairmount No. 2, .....	Armstrong, .....	132,909	3,602	.....	56,601	.....	.....	285	97	.....	.....	750	.....	7
Fairmount No. 4, .....	Armstrong, .....	130,771	3,408	.....	134,179	.....	.....	249	242	1	3	1,900	.....	18
Total, .....		338,339	7,100	254	345,693	.....	.....	209.33	574	2	3	4,750	.....	45
F. A. Mizener.														
Mizener, .....	Butler, .....	44,206	62	527	44,795	.....	.....	273.25	90	.....	.....	250	.....	8
Grant, .....	Butler, .....	37,821	341	38	38,200	.....	.....	277.50	85	.....	1	2,500	.....	4
Total, .....		82,027	403	565	82,995	.....	.....	275.37	175	.....	1	250	2,500	12
Gilpin Coal Company.														
Gilpin, .....	Armstrong, .....	70,765	.....	.....	70,765	.....	.....	236	114	.....	.....	.....	.....	5
Pittsburg Coal Company.														
Glenshaw, .....	Allegheny, .....	66,692	910	466	67,978	.....	.....	270.50	110	.....	2	.....	.....	13
Freeport Coal Company.														
Freeport, .....	Allegheny, .....	10,617	.....	.....	10,617	.....	.....	200	20	.....	1	80	.....	1
Haddon Coal Company.														
Haddon, .....	Armstrong, .....	43,607	100	.....	43,707	.....	.....	217	69	.....	.....	415	.....	4

Jefferson, Cleefield Coal and Iron Company.									
Hamilton,	Jefferson,	15,000	964,038	145,555	393	264	152	2	18
Soldier No. 1,						264	618	1	45
Soldier No. 2,						264	281	4	27
Maplewood,	Jefferson,	4,000	143,562			264	19		40
Rathford,	Jefferson,	2,000	138,744			268	14	1	10
Shirwood,	Jefferson,	1,000	148,711			191	12		12
Silverwood,	Jefferson,	1,500	145,227			210	192		10
Total,		24,000	1,430,032	145,555	393	236.23	1,640	3	133
McFetridge Brothers.									
Hites or McFetridge Bros. No. 1,	Allegheny,	2,464	140,715			289	143		17
Hites or McFetridge Bros. No. 2,	Allegheny,		5,547			107	15		2
Total,		2,464	11,247	155,262		198	158		19
Hill Coal Company, Limited.									
Hill,	Mercer,	1,000	52,154			227.50	96		5
Hillville Coal and Mining Co.,									
Hillville,	Clarion,		50	2,500		54	37		2
Hoydale Coal Company.									
Hoydale,	Beaver,	75	8,100			199	15		3
Hickory Coal Company, Limited.									
Hickory,	Mercer,	762	1,436	29,448		252	65		5
Pittsburg and Buffalo Company.									
Johnston,	Armstrong,	3,000	8,500	126,500	6,000	10	268	135	
Pardee Coal Company.									
Pardee,	Mercer,		100	9,526		125	35	2	3
Turner Coal, Coke & Mining Co.									
Turner Coal, Coke & Mining Co.,	Butler,	350	130	51,391		296.50	82		10
Keystone No. 1,	Butler,	30	23	2,223	1	159.50	8		1
Keystone No. 2,						193	90		11
Total,		380	153	53,624					
American Sheet Steel Company.									
Kirkpatrick,	Armstrong,	50	21,184	24,264		303	21		2
Kerr Coal Company.									
Kerr No. 1,	Armstrong,		9,000	9,000		260	14		1
Kerr No. 2,	Butler,	50,000		50,000		262	82	1	50
Total,		50,000	9,000	59,000		261	96	1	5
Lanesco Coal Company.									
Lanesco,	Westmoreland,	7,167		7,167	2	243	22		2

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds dynamite used.	Number horses and mules.
Ben Franklin Coal Company, Metcalf, .....	Westmoreland, ..	15,000			15,000			260	28			225		2
C. P. McGafferty, .....	Clarion, .....	40,000	1,260		41,260			171	77					7
Monarch, .....	Clarion, .....													
Mosgrove Coal Works, .....	Armstrong, .....	87,626	122		87,748			297.4	136		1	600	1,700	11
Monterey Coal Company, .....	Clarion, .....	26,129			26,129			287.75	96			226		10
Penna. Salt Manufacturing Company, Natrona No. 1, .....	Allegheny, .....	125	3,600	164,913	168,538			260	102			440		14
Natrona No. 2, .....	Allegheny, .....							260	74			400	100	7
Total, .....		125	3,660	164,913	168,638			260	176			840	400	21
Nellie Coal Company, .....	Butler, .....													
Nellie, .....	Butler, .....	6,378	613	150	7,141			170.50	24					1
Oak Ridge Mining Company, .....	Armstrong, .....	156,587	1,888	260	158,675			194	268		1	950		17
Oak Ridge Nos. 3 and 5, .....	Armstrong, .....													
N. Y. & Cleveland Gas Coal Co., Plum Creek, .....	Allegheny, .....	226,519	1,808	1,399	229,756			279.75	254		1			13
Sandy Creek, .....	Allegheny, .....	268,900	1,269	1,399	271,578			288.50	279	1	1			37
Total, .....		435,319	3,107	2,708	441,131			279.12	523	1	2			50

Filer Brothers.													
Park- Pine Run Coal and Coke Co. Pine Run Nos. 1 and 2.	Mercer, .....	101,322	300	359	171,962	.....	285.25	1.4	.....	1	420	300	14
Penn. Penn Coal Company.	Westmoreland, ..	15,881	.....	.....	45,884	.....	253	98	.....	.....	.....	.....	5
Roaring Run Coal and Coke Co. Roaring Run, .....	Lawrence, .....	13,321	.....	.....	13,321	.....	178	38	.....	.....	25	.....	3
Leachburg Coal and Coke Co. Riverview, .....	Westmoreland, ..	5,968	.....	.....	5,968	.....	87	22	.....	1	.....	.....	4
Donnelly, Dunham & Company. Riverview, .....	Westmoreland, ..	80,169	212	.....	80,381	.....	305	103	.....	.....	760	.....	6
Boyle Coal Company. Rock Point, .....	Armstrong, .....	67,928	2,100	3	70,031	.....	161	126	.....	4	250	.....	13
George E. Tener. George G. Stage.	Butler, .....	16,197	.....	625	16,822	.....	167	33	.....	.....	82	20	4
Campbell, Lowther Coal Co. Standard, .....	Lawrence, .....	15,720	62	.....	15,782	.....	396	42	.....	.....	26	12	10
Sterling Mining Co., or W. H. Warner. Sterling, .....	Butler, .....	30,143	.....	.....	30,143	.....	220	58	.....	.....	10	1,500	4
Standard Coal Mining Co. State Line Coal Company.	Clarion, .....	5,209	.....	19	5,228	.....	77	32	.....	.....	32	.....	3
Sterling Coal Company. Sterling, .....	Beaver, .....	15,934	200	.....	16,134	.....	94	108	.....	.....	118	.....	3
Sligo Coal Company. Sligo, .....	Butler, .....	19,300	.....	526	19,826	.....	232	45	.....	.....	120	200	4
Mercer Iron and Coal Company. Stonboro No. 2. Stonboro No. 3.	Beaver, .....	40,210	1,500	.....	41,710	.....	99	121	.....	.....	320	.....	6
Total,	Clarion, .....	27,385	.....	.....	27,385	.....	225	49	.....	.....	75	50	2
	Clarion, .....	65,950	.....	80	66,030	.....	192	61	.....	1	140	30	3
	Mercer, .....	5,174	119	.....	5,294	.....	88.25	33	.....	.....	14	.....	5
	Mercer, .....	87,217	2,762	.....	89,979	.....	237.25	147	.....	.....	563	90	11
	Total,	92,122	2,481	.....	94,603	.....	171.75	10	.....	.....	517	90	16



TABLE II.—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.																						
		Number of tons used for steam and heat at colliery.																						
		Sold to local trade and used by employes—tons.		Total production of coal in tons.		Total production of coke in tons.		Number of coke ovens.		Number days worked.		Number persons employed.		Number fatal accidents.		Number non-fatal accidents.		Number kegs powder used.		Number pounds of dynamite used.		Number horses and mules.		
Thompson Run Coal Company.	Beaver.	58,322	36	58,368			27	87																11
Thompson Run,	Westmoreland,	37,490		37,490			213	72																4
West Penn Mining Co.	Butler,	7,560	2,200	10,000			166	40																1
The Wahvillie Coal Company.	Armstrong,	5,000		5,000			60	29																
Wahvillie Nos. 1 and 2,		5,197,510	297,892	5,604,679	151,555	403	206,50	8,811	7	40	24,919	13,731												665
Valley.																								
James S. Moore.																								
Totals,																								

\$27,694 tons from these mines was made into coke.







TABLE III.—Showing the number of employees at each colliery in the Third Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupation of Persons Employed Outside.							Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.		All other employees.	Total outside.
Acme Coal Mining Co.	Clarion.	1	.....	35	.....	4	.....	3	43	1	.....	1	.....	.....	1	2	4	47
Avondale Mining & Manfg. Co.	Clarion.	1	.....	47	.....	6	1	1	56	1	.....	1	.....	.....	1	4	6	62
Avondale.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Aladdin. Joseph G. Beale.	Armstrong.	1	.....	44	2	2	.....	.....	49	1	.....	1	1	.....	1	3	6	55
Straightwell. Hibbard & Co.	Jefferson.	1	.....	70	.....	4	2	.....	77	3	3	3	.....	.....	1	3	10	87
Anderson Run.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Avonmore Coal and Coke Co.	Armstrong.	1	.....	85	2	7	2	.....	97	1	1	1	2	.....	1	8	13	110
Avonmore.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allegheny Coal and Coke Co.	Allegheny.	1	.....	24	.....	2	.....	.....	27	.....	.....	.....	.....	.....	1	.....	1	28
Allegheny Avenue.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butts Cannel Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anandale.	Butler.	1	.....	8	.....	1	.....	.....	9	.....	.....	.....	.....	.....	.....	3	3	12
Butts Cannel shaft.	Beaver.	1	.....	50	1	3	.....	.....	55	1	1	1	.....	.....	.....	6	8	63
Total.	.....	1	.....	58	1	4	.....	.....	64	1	1	1	.....	.....	.....	9	11	75



[illegible]



Jos. and M. A. Lehner.	Clarion.	1	64		4			60	1			2	8	11	80
Eagle.															
Wanam Run Coal Co.	Lawrence.	1	87		8			4	16	1	3	1	3	2	11
Excelsior No. 3.															
P. D. Sherwin.	Butler.	1	15		1				17		1	1		4	23
Enterprise.	Butler.	1	47		3			1	52		2	2	1	2	60
Sherwin.															
Total.		2	62		4			1	60		3	3	1	6	83
Grove Coal Co.															
Enterprise.	Mercer.	1	69		6				73	1	1	3		3	87
Fairmount Coal Co.															
Fairmont No. 1.	Armstrong.	1	180		4			2	6		4	2	3	2	285
Fairmont No. 2.	Armstrong.	1	64		6			1	3		2	2		1	87
Fairmont No. 4.	Armstrong.	1	186		1			16	3		4	2	2	1	242
Total.		3	430		17			42	12		10	6	7	4	774
Freeport Coal Co.															
Freeport.	Allegheny.	1	16					1						1	20
F. A. Mizener.															
Grant.	Butler.	1	72					5	1			1		1	85
Mizener.	Butler.	1	76					8	2					2	90
Total.		2	148					13	3			1		3	175
Gilpin Coal Co.															
Gilpin.	Armstrong.	1	100		1			5	2			1		1	111
Pittsburg Coal Co.															
Glenshaw.	Allegheny.	1	85		3			7	1			2	2	2	110
Haddon Coal Co.															
Haddon.	Armstrong.	1	58					4				1		1	69
Jefferson, Clearfield Coal & Iron Company.															
Hamilton.	Jefferson.	1	127		16			2	7						153
Soldier No. 1.	Jefferson.	1	375		28			9	29						618
Soldier No. 2.	Jefferson.	1	240		23			5	12						281
Maplewood.	Jefferson.	1	150		10			2	9			1	5		184
Madison.	Jefferson.	1	144		16			3	3			1	2		170
Sherwood.	Jefferson.	1	30		3			1	1			3		3	42
Virginia.	Jefferson.	1	160		10			2	9			1	2	6	182
Total.		7	1,224		100			24	70		1	8	20	5	1,640

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupation of Persons Employed Outside.							Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.		All other employees.	Total outside.
McFetridge Brothers.	Allegheny.	2	1	112	.....	8	3	3	129	1	2	4	.....	.....	2	5	14	143
Hites or McFetridge Bros. No. 1.		1	.....	12	.....	1	.....	.....	14	1	.....	.....	.....	.....	.....	.....	1	15
Hites or McFetridge Bros. No. 2.	Allegheny.	3	1	124	.....	9	3	3	143	2	2	4	.....	.....	2	5	15	158
Total.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hill Coal Co., Limited.	Mercer.	1	.....	75	4	5	.....	.....	85	.....	2	3	2	.....	1	3	11	96
Hillville Coal Mining Co.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hillville.	Clarion.	1	.....	26	.....	2	.....	1	30	.....	1	.....	1	.....	1	4	7	37
Total.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hoytdale Coal Co.	Beaver.	1	.....	11	.....	2	.....	.....	14	.....	.....	.....	.....	.....	1	.....	1	15
Total.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hickory Coal Co., Limited.	Mercer.	2	.....	44	2	4	2	1	55	.....	1	2	2	.....	3	2	10	65
Hickory.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pittsburg and Buffalo Co.	Armstrong.	1	.....	100	7	4	.....	5	117	1	3	2	.....	.....	3	9	18	135
Johnetta.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
"K," Pardoe Coal Co.	Mercer.	1	.....	25	2	2	.....	1	31	.....	1	1	1	.....	1	.....	4	35
Total.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Turner Coal, Coca & Mining Co.	1	64	1	7	1	74	1	1	1	2	2	8	82
Keystone No. 1, .....	1	71	1	8	1	82	1	1	1	2	2	8	90
Total, .....	1	18	2	2	21	21	21	21	21	21	21	21	21
American Sheet Steel Co.	1	12	1	1	14	14	14	14	14	14	14	14	14
Kirkpatrick, .....	1	70	1	3	75	75	75	75	75	75	75	75	75
Kerr No. 1, .....	1	82	1	4	89	89	89	89	89	89	89	89	89
Kerr No. 8, .....	2	82	2	4	89	89	89	89	89	89	89	89	89
Total, .....	1	12	1	2	16	16	16	16	16	16	16	16	16
Lucas, .....	1	23	2	2	26	26	26	26	26	26	26	26	26
Ben Franklin Coal Co.	1	55	2	6	64	64	64	64	64	64	64	64	64
Metcalfe, .....	1	110	2	8	123	123	123	123	123	123	123	123	123
C. P. McCafferty	1	80	7	7	90	90	90	90	90	90	90	90	90
Monarch, .....	1	72	7	2	85	85	85	85	85	85	85	85	85
Mosgrove Coal Works.	1	55	5	2	66	66	66	66	66	66	66	66	66
Mosgrove, .....	2	127	12	4	151	151	151	151	151	151	151	151	151
Monterey Coal Co.	1	17	1	1	20	20	20	20	20	20	20	20	20
Penna. Salt Man'g Co.	1	195	8	18	233	233	233	233	233	233	233	233	233
Natrona No. 1, .....	1	200	12	10	232	232	232	232	232	232	232	232	232
Natrona No. 2, .....	1	201	7	21	235	235	235	235	235	235	235	235	235
Total, .....	2	401	7	33	468	468	468	468	468	468	468	468	468
Nellie, .....	1	108	5	11	126	126	126	126	126	126	126	126	126
Nellie Coal Co.	1	85	1	5	92	92	92	92	92	92	92	92	92
Oak Ridge Mining Co.	1	108	5	11	126	126	126	126	126	126	126	126	126
Oak Ridge Nos 3 and 5, .....	1	85	1	5	92	92	92	92	92	92	92	92	92
N. Y. & Cleveland Gas Coal Co.	2	401	7	33	468	468	468	468	468	468	468	468	468
Pium Creek, .....	1	108	5	11	126	126	126	126	126	126	126	126	126
Sandy Creek, .....	3	401	7	33	468	468	468	468	468	468	468	468	468
Total, .....	1	108	5	11	126	126	126	126	126	126	126	126	126
Filer Brothers.	1	85	1	5	92	92	92	92	92	92	92	92	92
Pardoe, .....	1	108	5	11	126	126	126	126	126	126	126	126	126
Pine Run Coal and Coke Co.	1	85	1	5	92	92	92	92	92	92	92	92	92
Pine Run Nos. 1 and 2, .....	1	108	5	11	126	126	126	126	126	126	126	126	126





Sterling Mining Co. or W. H. Warner.	1	75	5	20	101	1	1	2	1	2	7	108
Sterling, .....	1	35	3	1	40	1	1	1	2	1	5	45
Standard Coal Mining Co.	1	98	3	2	108	2	3	1	7	13	121	
Standard, .....	1	40	2	1	45	1	1	1	1	4	49	
State Line Coal Co.	1	50	2	1	55	1	1	1	2	6	61	
State Line, .....	1	19	3	6	29	1	1	1	2	4	23	
Sterling Coal So.	1	104	8	2	131	2	3	4	1	6	16	147
Sterling, .....	2	123	11	2	160	3	4	4	1	8	20	189
Sligo Coal Co.	1	65	7	1	77	2	1	1	1	6	10	87
Sligo, .....	1	60	4	1	66	1	1	1	3	6	72	
Mercer Iron and Coal Co.	1	30	4	1	35	1	2	2	5	40		
Stoneboro No. 2.	1	20	3	2	26	1	1	1	2	4	30	
Stoneboro No. 3.	103	1	541	106	7,799	20	131	77	116	431	1,012	8,811
Total, .....			133	213	20	117	131	77	130	116	431	8,811
Thompson Run Coal Co.	1	65	2	1	77	2	1	1	1	6	10	87
Thompson Run, .....	1	60	1	1	66	1	1	1	3	6	72	
West Penn Mining Co.	1	30	4	1	35	1	2	2	5	40		
West Penn, .....	1	20	3	2	26	1	1	1	2	4	30	
Wahlville Coal Co.	1	6,682	133	213	7,799	20	131	77	116	431	1,012	8,811
Wahlville, .....	103	1	541	106	7,799	20	131	77	116	431	1,012	8,811
James S. Moore.	1	20	3	2	26	1	1	1	2	4	30	
Valley, .....	103	1	541	106	7,799	20	131	77	116	431	1,012	8,811
Totals, .....	103	1	541	106	7,799	20	131	77	116	431	1,012	8,811

TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Acme Coal Mining Co., .....	Clarion,	54	17	23	23	19	19	18	8	11	14	12	11
Avondale Mining and Manfg. Co., .....	Clarion,	20	13	22	26	25	23	20	16	18	22	18	18
Joseph G. Beale, .....	Jefferson,	20	13	22	26	25	23	20	16	18	22	18	18
Straightwell, Hibbard & Co., .....	Jefferson,	20	13	22	26	25	23	20	16	18	22	18	18
Albion Coal and Coke Co., .....	Allegheny,	23	21	24	23	21	25	21	25	22	25	24	21
Albion Coal and Coke Co., .....	Allegheny,	23	21	24	23	21	25	21	25	22	25	24	21
Butts Chapel Coal Co., .....	Butler and Beaver,	25	22.50	17.50	1	3.75	7.50	19.50	23.50	15	18	22	22
Keystone Coal Mining Co., .....	Armstrong and Clarion,	22.50	21.50	24	23	22.50	19	19	15	15	18	22	18
Joseph G. Beale & Co., .....	Armstrong,	24.50	17	29	22	21	20	2	15	21	19	20	24
Braeburn Steel Co., .....	Westmoreland,	26	24	26	26	26	25	27	27	24	27	25	25
Sharon Coal and Limestone Co., .....	Mercer, Law, & Butler,	25	24	26	25	24	20	22.50	25	24	24	24.50	24.50
Brackenridge Coal Co., .....	Allegheny,	27	24	26	25	27	24	26	26	25	27	26	26
Beaver Coal and Coke Co., .....	Lawrence,	25	19	22	23	26	22	21	26	21	27	20	24
Lewis Coal Co., .....	Westmoreland,	20	18	20	21	22	23	22	23	21	25	20	22
Barclay Coal and Coke Co., .....	Armstrong,	13.50	8.50	7.75	15.50	10	11.50	4.75	4.50	8.50	6.50	6.75	11.75
Beale, Peacock & Kerr, Inc., .....	Jefferson,	50	21	22	15	18	16	17	18	20	24	23	18
Brinker Coal and Iron Co., .....	Clarion,	20	21	22	15	18	16	17	18	20	24	23	18
Pittsburgh Plate Glass Co., .....	Allegheny,	20	21	22	15	18	16	17	18	20	24	23	18
Cherry Run Mining Co., .....	Clarion,	17	17	19	11	18	14	14	9	12	16	14	15
Marion, .....	Clarion,	24	21	25	24	21	18	18	27	23	17.50	4	22
W. F. Chas., .....	Beaver,	27	24	26	26	22	23	23	27	23	27	25	24
Coxsawville Mining Co., .....	Armstrong,	15	20	20	25	20	15	12	19	18	19	19	20
Hamilton Coal Mining Co., .....	Westmoreland,	20	18	18	15	23	18	22	19	19	21	22	23
Carrier Brothers, .....	Jefferson,	24	14	25	24	22	22	22	24	24	25	24	20
Catfish Run Coal Co., .....	Clarion,	20	19	19	21	20	20	20	20	20	20	20	21
Cornell Coal Co., .....	Allegheny,	22	20	18	20	21	23	23.50	27.25	22	25	25	23.50
Filer, Sutliff & Co., .....	Mercer,	22	20.50	27.50	13.25	23.25	23.50	27.25	22	16.75	25	25	26
J. W. Ganoe, .....	Clarion,	25	14.8	19	12.6	5.9	2.7	8.2	7.2	9.7	11.5	7.4	12
Addison Davidson, .....	Beaver,	24	24	26	26	17	12	23	14	27	27	25	25
Darlington Brick and Mining Co., .....	Clarion,	23	22	25	25	24	11	26	24	15	20	18	20
J. S. and M. A. Lehner, .....	Clarion,	25	20	22	23	19	11	20	18	15	20	18	20
Wampum Run Coal Co., .....	Lawrence,	21	20	22	22	26	23.50	23.50	23.50	24	24	24.50	24
Butler, .....	Butler,	23	21	23	23	23	21	19	15	13.50	15.50	14	20
C. D. Sherwin, .....	Mercer,	24	22	24	23	23	23	23.66	20.23	22	23	23	23.66
Grave Coal Co., .....	Allegheny,	24	22	24	23	23	23	20	23	22	23	23	23.66
Farmland Coal Co., .....	Allegheny,	24	22	24	23	23	23	20	23	22	23	23	23.66
Freepot Coal Co., .....	Allegheny,	21	19	25	22	18	20	20	23	18	12	23	20

F. A. Mizerer,	Butler,	21.75	23.50	21.75	23.25	23.50	21.75	22.00	22.50	23.12	25.50	19	22.25	27.37
Chillicothe Coal Co.,	Allegany,	25	22	22	22	22	22	19	18	18	22	22	21	25
Highland Coal Co.,	Allegany,	25.25	22.50	23	12.25	23	22.75	24.25	26.50	24.75	22.75	22	21.50	27.50
Hudson Coal Co.,	Armstrong,	24	23	24	19	19	15	20	14	26	16	24	24	30
Jefferson, Clearfield Coal and Iron Co.,	Jefferson,	19.57	17.71	21.14	16.85	18.57	20	20.28	19	19.28	18	38.14	17	21
McFerridge Bros.,	Allegany,	26.50	24	26	15.50	14.75	24.50	21	22	21	25.50	21	21	28
Hill Coal Co., Limited,	Mercer,	22.50	20.50	19.50	16.50	14	17	19	19	20	19	20	20	27.50
Hillville Coal and Mining Co.,	Clarion,	20	9	13	18	20	15	19	23	14	3	16	15	54
Hoytdale Coal Co., Limited,	Beaver,	24	23	24	13	22	14	22	23	22	20	17	11	19
Hickory Coal Co.,	Mercer,	25	23	26	25	24	25	26	26	24	26	24	24	238
Pittsburg and Buffalo Co.,	Armstrong,													
Pardoe Coal Company,	Mercer,													
Turner Coal, Coke and Mining Co.,	Butler,	24.50	19	13.75	15	24	22.50	15.50	20	22	21	22.25	22	133
American Sheet Steel Co.,	Armstrong,	27	24	26	26	24	25	24	27	25	27	25	24	163
Kerr Coal Co.,	Westmoreland,	15	21	25	23	24	20	19	26	28	25	27	25	11
Lanesburg Coal Co.,	Westmoreland,	12	24	25	23	24	20	18	18	19	22	24	23	230
C. P. McElverty,	Clarion,	20	13	18	21	6	8	14	12	13	19	15	15	171
Musgrave Coal Works,	Armstrong,	20	13	18	21	10.5	13.9	14	12.3	10.9	11.5	16.9	20	27.4
Monterey Coal Co.,	Clarion,	27	24	26	25.50	23	23	24	23.25	22.50	23.50	23	22.75	287.75
Penna. Salt Manufacturing Co.,	Allegheny,	25	25	26	22	18	20	20	18	18	18	24	26	260
Nellie Coal Co.,	Butler,	21.50	14											
Oak Ridge Mining Co.,	Armstrong,	20.50	14.75	18.50	11.50	11.50	14	12.25	21.50	19	18	13	15.50	10.50
New York & Cleveland Gas Coal Co.,	Allegheny,	21.25	23.75	24.12	20.37	22.21	22.12	24.12	25	23.12	24	22	22.75	194
Filler Brothers,	Mercer,	17	22.25	26	22.75	21.75	25	21.75	25.75	22.25	25.25	24.75	23.75	279.12
Pine Run Coal and Coke Co.,	Westmoreland,	23	21	26	24	24	19	20	21	17	20	16	23	256.25
Penn Coal Co.,	Lawrence,	12	14.50	12	10.50	15.50	10.50	9	21	11.50	19	18	20.50	178
Bearing Run Coal and Coke Co.,	Westmoreland,													
Loeschburg Coal and Coke Co.,	Westmoreland,	27	24	26	26	25	25	24	9	17	16	13	24	57
Donnelly, Dunham & Co.,	Armstrong,	16	4	21	20	18	18	16	27	24	27	23	25	103
Royle Coal Co.,	Butler,	23	23	25	23	23	23	23	8	10	10	20	20	167
George C. Toner,	Lawrence,	27	23	26	24	27	23	26	37	34	37	25	24	306
Connell, Butler Coal Co.,	Clarion,	21	17	20	20	18	18	20	16	17	20	12	23	230
Stearns Mining Co. or W. H. Warner,	Beaver,	23												
Standard Coal Mining Co.,	Butler,	24	22	24	24	24	22	22	15	15	21	12	23	94
State Line Coal Co.,	Beaver,	18	22	23	15	21	22	15	20	15	21	12	23	2
Starling Coal Co.,	Clarion,	24	22	25	24	4	20	18	15	15	18	21	13	99
Sisco Coal Co.,	Clarion,	20	20	23	21	20	18	19	15	15	18	21	13	225
Moscor Iron and Coal Co.,	Mercer,	25	18	22	22	13	10	14	13	8	23	15	14	192
Thompson Run Coal Co.,	Mercer,	20	18.25	23.50	16.62	17.12	21.50	20	20.50	23.50	18	22	23	257
West Penn Mining Co.,	Beaver,	26	21	20	24	19	17	18	22	18	27	23	23	213
Wahville Coal Co.,	Westmoreland,	22	19	24	21	16	19	18	18	18	25	19	25	166
James S. Moore,	Butler,	20	21	19			20	22	25	25	24	25	25	10

TABLE IV—List of fatal accidents that occurred in and about the mines of the Third Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb. 18	Lawrence Linkosky.	Pole.	Miner.	33	M.	1	1	Soldier No. 1.	Jefferson.	Killed by a fall of roof slate while he was cutting down coal in his room. Linkosky and his partner neglected to support the roof properly.
March 12	Fred Walker.	American.	Miner.	36	M.	1	8	Valley.	Armstrong.	Fatally injured by a fall of roof slate. He had neglected to post it up after having taken the coal from beneath it.
13	Frank Morris.	Welsh.	Miner.	18	S.	.....	.....	Fairmount No. 4.	Armstrong.	Was instantly crushed to death beneath a fall of roof slate. He and his partner were about to take the loose slate down or make it secure with timber, but in the interval the victim went beneath the loose roof for some purpose when it fell upon him.
19	A. C. Warnick.	American.	Driver.	33	M.	1	3	Fairmount No. 1.	Armstrong.	His back was broken by a mine car. He was sitting at the slide on the track at the head of the mine when the car started. One of the cars jumped the track at the latches and as he attempted to push the empty car from him he was caught, which resulted in his fatal injury. Warnick had been previously warned by the mine foreman not to sit at the latches but he disobeyed the order. These two men were killed by a hauling rope outside of the mines. The two first empty cars of the trip left the track and Jennings had them pulled on again by means of the hauling engines but in doing so the two rear cars became fastened to the tracks of the haulage. Jennings and Swandrick were holding on to a front car on the trip by means of a lever and while attempting to have the two rear cars pulled on to the track
Sept. 9	Richard Jennings.	English.	Outside foreman.	36	M.	1	3	Hamilton.	Jefferson.	
9	Joe Swandrick.	Pole.	Laborer.	24	M.	.....	.....	Hamilton.	Jefferson.	



again by the engines the sheaves were torn from their fastenings, setting the rope free and striking the men with terrific force, killing both. Jennings erred in judgment. Was killed by a fall of "slate" while he was engaged in taking down coal in his room. His skull was fractured. The accident was the result of the victim's own carelessness.

April 8	Chas. Fred'k Berg...	American, .....	Miner, .....	22	S. ....	Sandy Creek, ....	Allegheny.
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TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Third Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 21	Columbus Beale, .....	American, .....	Laborer, .....	21	S.	Johnetta, .....	Armstrong, ....	Caught between loaded cars and tippie
31	Merle Stewart, .....	American, .....	Miner, .....	28	M.	Sligo, .....	Clarion, .....	Washed outside of the mine.
7	Frank Barlow,* .....	Hungarian, ....	Miner, .....	46	M.	Glenshaw, .....	Allegheny, ....	Chest and abdomen crushed by a fall of coal.
Feb. 1	Paul Zezulia, .....	Pole, .....	Scrapper, .....	34	S.	Rathmel, .....	Jefferson, .....	Shoulder was dislocated by being struck by a runaway car.
11	John Forringer, .....	German, .....	Miner, .....	59	S.	Enterprise, .....	Butler, .....	Back fractured by a fall of coal.
22	Fritz Shilling,* .....	American, .....	Driver, .....	17	S.	Glenshaw, .....	Allegheny, ....	Leg fractured by a fall of slate.
23	Roddy C. Connor, .....	American, .....	Miner, .....	41	M.	Fairmount No. 4, .....	Armstrong, ....	Leg broken by cars.
25	Clyde Dinger, .....	American, .....	Driver, .....	22	S.	Oak Ridge No. 5, .....	Armstrong, ....	Was seriously injured by a fall of roof.
2	Thomas Poole, .....	American, .....	Miner, .....	69	S.	Brady's Bend, .....	Armstrong, ....	Was crushed internally by car in the mine.
5	Jabez Griffith, .....	Welsh, .....	Miner, .....	52	M.	Riverview, .....	Armstrong, ....	Hand injured by a fall of coal.
6	David Smith, .....	American, .....	Driver, .....	32	S.	Pardoe, .....	Armstrong, ....	Back sprained by a fall of roof slate.
9	Thos. J. Buckham, ....	American, .....	Driver, .....	19	S.	Silverview, .....	Armstrong, ....	Two ribs broken by cars in the mine.
13	Samuel Craig, .....	German, .....	Machine cutter, .....	44	M.	Soldier No. 1, .....	Jefferson, .....	Was injured by cars in the mine.
18	Alexander Kennesht, .....	Pole, .....	Machine cutter, .....	33	M.	Soldier No. 2, .....	Jefferson, .....	Winkie broken by car falling on it.
18	James Mitchell, .....	American, .....	Laborer, .....	19	S.	Soldier No. 2, .....	Jefferson, .....	Back injured by a fall of slate.
18	Joseph Doucherty, .....	American, .....	Miner, .....	56	M.	Roaring Run, .....	Westmoreland, .....	Back injured by the same fall of slate.
2	Phillip A. Byers, .....	American, .....	Miner, .....	27	M.	Riverview, .....	Armstrong, ....	Leg broken by a fall of coal.
May 11	Jacob Wensel, .....	American, .....	Miner, .....	28	M.	Cherry Run, .....	Clarion, .....	Two toes cut off by fall of coal.
14	Frank Patvilli, .....	Italian, .....	Machine cutter, .....	36	M.	Soldier No. 1, .....	Jefferson, .....	Ankle, hip and side injured by fall of slate.
14	Andrew Garity, .....	Scotch, .....	Engineer, .....	28	M.	Soldier No. 2, .....	Jefferson, .....	Was caught by a fall of top coal.
14	Peter Shaffer,† .....	German, .....	Miner, .....	48	S.	Plum Creek, .....	Allegheny, ....	Back injured by the pinion and gear wheels of hauling engine.
20	William Gardner, .....	American, .....	Weighmaster, .....	34	M.	Freeport, .....	Allegheny, ....	Three ribs broken by a fall of slate while working in his room.
June 14	Floyd Hawk, .....	American, .....	Driver, .....	14	S.	Keystone, .....	Clarion, .....	Hip bone broken by being caught between coal pan and tippie.
17	Lee McAnish, .....	American, .....	Miner, .....	45	M.	Mosgrove, .....	Armstrong, ....	Small bone of arm broken. He was thrown from a tippie.
								Was injured by fall of coal.

27	John Fleeger, .....	American, .....	Trapper, .....	53	M. Avonmore, .....	Armstrong, ....	Foot sprained and bruised by the haulage
July	William Fleeger, .....	American, .....	Miner, .....	34	M. Avonmore, .....	Armstrong, ....	Collar bone broken by a fall of "draw slate,"
Sept.	Michael Bettermie, ..	Italian, .....	Miner, .....	36	M. Sandy Creek, .....	Allegheny, ....	Left leg and right arm were broken by a fall of roof slate.
17	Mike Cabbage, .....	Pole, .....	Miner, .....	42	M. Kerr No. 8, .....	Butler, .....	Severely injured about the head and body by a fall of slate.
6	Antoma Caveller, ....	Italian, .....	Miner, .....	36	M. Grant, .....	Butler, .....	Several ribs broken and cut about his head by a fall of slate.
6	Harry Scaddon, .....	American, .....	Driver, .....	30	M. Fairmount No. 4, ..	Armstrong, ....	Several bones of his right foot broken by cars.
Nov.	George Crawford, .....	American, .....	Weighmaster, ..	20	S. Bagdad, .....	Armstrong, ....	Leg broken and toes mashed by railroad car.
14	Joe Standoon, .....	Pole, .....	Miner, .....	24	S. Soldier No. 1, .....	Jefferson, .....	Hip dislocated by a fall of slate.
15	Henry B. Fox, .....	American, .....	Car trimmer, ..	63	M. Fairmount No. 4, ..	Armstrong, ....	Leg was cut off by a railroad car.
22	James Klugh, .....	American, .....	Miner, .....	34	M. Enterprise, .....	Butler, .....	Leg was badly bruised by a piece of "draw slate" falling upon it.
27	James Fultz, .....	American, .....	Carpenter, .....	34	M. Soldier No. 1, .....	Jefferson, .....	Several ribs broken while he was repairing the elevators.
27	Charles Stewart, .....	American, .....	Pumper, .....	21	S. Riverview, .....	Armstrong, ....	Face and hands burned by gasoline which exploded while he was emptying it into a tank inside of the mine.
Dec.	Anthony Linfents, ....	German, .....	Miner, .....	48	M. Johnetta, .....	Armstrong, ....	Hips sprained by a fall of slate.
3	David Detch, .....	German, .....	Driver, .....	52	M. Soldier No. 2, .....	Jefferson, .....	Leg broken by cars in the mine.
20	William Brogan, .....	American, .....	Miner, .....	28	S. Catfish Run, .....	Clarion, .....	Head injured by a mule kicking him.

\*These accidents are transferred from the Seventh district to the Third district owing to the change of districts last May.

+This accident was transferred from the Second to the Third district owing to the rearrangement of the districts in May.



# Fourth Bituminous District.

ELK, JEFFERSON, CLEARFIELD, CENTRE, TIOGA, CLINTON, LYCOMING,  
BRADFORD AND McKEAN COUNTIES.

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DuBois, Pa., February 24, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of herewith submitting my annual report for the Fourth Bituminous District, for the year ending December 31, 1901. In compliance with the provisions of the act of Assembly approved May 15, 1893.

The production of coal as reported to this office, amounts to 5,802,779 short tons for the year. Of this 5,583,744 tons were shipped to market by rail and 89,285 tons were manufactured into coke, while 129,750 tons was sold to employes and others, and used at the mines for producing steam. There has been a great deal of idle time at a majority of the mines during the summer and autumn having been caused principally from a shortage of cars. Fifty-seven accidents occurred in and about the mines during the year, in which thirteen persons lost their lives, while many of the non-fatal accidents were of a very serious nature, the victims suffering the loss of limbs. As a result of these accidents, four wives were left widows and seventeen children fatherless. In reviewing these sad occurrences I am sorry to say, that a large percentage of them were the result of carelessness, and lack of forethought on the part of the victims, and others, many of whom had but little knowledge of the dangers incident to coal mining. The condition of the mines as a whole is reasonably good. Two ventilating fans were installed during the year, and two furnaces dispensed with, as they had become inadequate to provide a lawful volume of air. The report contains the usual statistical tables, and description of improvements made by several companies, together with some additional information relative to machine mining, and ventilation of the mines of the district.

All of which is very respectfully submitted,

ELIAS PHILLIPS,

Inspector.



## Summary of Statistics 1901.

The figures denoting production, shipments, etc., are short tons:

Number of mines in the district, .....	78
Number of mines in operation during 1901, .....	76
Number of tons of coal produced, .....	5,802,779
Number of tons shipped, .....	5,583,744
Number used in the manufacture of coke, .....	89,285
Number used for steam at mines, .....	68,504
Number sold to employes and others, .....	61,246
Number mined by pick, approximately, .....	4,504,339
Number mined by machine (electric), approximately, .....	302,980
Number mined by machine (compressed air), approximately, .....	995,460
Number of tons of coke produced, .....	44,376
Number of coke ovens, .....	500
Number of persons employed inside the mines, .....	8,459
Number of persons employed outside the mines, ....	1,122
Number of mules and horses used, .....	670
Number of fatal accidents, .....	13
Number of non-fatal accidents, .....	44
Number of tons of coal produced per life lost, .....	446,376
Number of tons of coal produced per non-fatal accident, .....	131,881
Number of persons employed per each fatal accident, .....	737
Number of persons employed per non-fatal accident, .	217.75
Number of wives made widows by accidents, .....	4
Number of children orphaned by accidents, .....	17
Number of kegs of powder reported used, .....	42,889
Number of pounds of dynamite reported used, .....	40,150
Number of cylindrical boilers, .....	12
Number of tubular boilers, .....	84
Number of steam locomotives, .....	17
Number of air locomotives, .....	1
Number of electric locomotives, .....	20
Number of air compressors, .....	12
Number of electric dynamos, .....	14
Number of new mines opened, .....	4
Number of old mines abandoned, .....	1
Number of old mines re-opened, .....	1
Average number of days worked at all the mines, ..	221.25

TABLE A—Showing the Production of Coal and Coke by the Several Companies During the Year 1901.

Names of Companies.	Production of coal in tons.	Production of coke in tons.
Jefferson and Clearfield Coal and Iron Company, .....	797,323	.....
Northwestern Mining and Exchange Company, .....	806,767	.....
Clearfield Bituminous Coal Corporation, .....	582,637	21,235
Shawmut Mining Company, .....	469,786	.....
Blossburg Coal Company, .....	362,427	.....
Lehigh Valley Coal Company, .....	411,633	.....
Berwind White Coal Mining Company, .....	281,096	.....
Jefferson Coal Company, .....	280,060	.....
Magee and Ellsworth, .....	163,058	.....
Morris Run Coal Mining Company, .....	333,592	.....
Kettle Creek Coal Mining Company, .....	306,228	.....
Red Run Coal Company, .....	107,097	.....
Frank Williams & Company, .....	151,675	23,141
Joseph H. Reilly & Company, .....	103,847	.....
Kelly & Nugent, .....	12,048	.....
Rochester and Pittsburg Coal and Iron Company, .....	204,376	.....
Hall and Kaul, .....	19,242	.....
Harbison Walker Company, .....	12,844	.....
Matt. Schadeck, .....	9,251	.....
Long Valley Coal Company, .....	22,359	.....
W. F. Holt, .....	19,240	.....
J. F. Keating, .....	15,873	.....
A. G. Spears, .....	13,305	.....
Kersey Coal and Coke Company, .....	154,104	.....
Elk Coal Company, .....	27,679	.....
Cardiff Coal and Coke Company, .....	19,615	.....
Isaac Stage, .....	10,186	.....
Kelly Brothers, .....	50,495	.....
Estate of W. J. Jackson, .....	22,498	.....
Karthauss Coal Mining Company, .....	9,100	.....
Clearfield and Grampian Coal Co., .....	24,060	.....
Total, .....	5,802,779	44,376

## Production by Counties.

Clearfield, .....	1,642,961	44,376
Jefferson, .....	1,124,570	.....
Elk, .....	1,231,209	.....
Tioga, .....	859,077	.....
Centre, .....	493,416	.....
Clinton, .....	306,228	.....
Lycoming, .....	167,695	.....
Bradford, .....	22,379	.....
McKean, .....	15,873	.....
Total, .....	5,802,779	44,376

TABLE B—Showing the total tonnage, number of fatal and non-fatal accidents, tonnage of coal produced per fatal and non-fatal accident, total number of persons employed, number of persons employed per life lost, and persons injured, and the average number of tons of coal produced per employee.

Name of Companies.	Total number of tons of coal produced.	Number of lives lost.	Number of serious accidents.	Number of tons of coal produced per life lost.	Number of tons of coal produced per non-fatal accident.	Total number of persons employed.	Number of persons employed per life lost.	Number of persons employed per non-fatal accident.
Jefferson and Clearfield Coal and Iron Co., .....	797,323	5	1	159,464.6	859	171.5		
N. W. Mining & Exchange Co., Clearfield Bit. Coal Corporation, Shawmut Mining Co., .....	806,747	2	1	403,383.5	806,767	1,318	659	131.8
Blossburg Coal Co., .....	782,057	1	2	2,018.5	2,018.5	921	682	460.5
Lehigh Valley Coal Co., .....	460,786	1	1	460,786	362,327	1,077	539	107.7
Berwind White C. M. Co., .....	362,427	1	3	411,639	137,211	539	539	179.7
Jefferson Coal Co., .....	411,632	12	3	23,424.66	331	275.8		
Magee & Ellsworth, .....	281,096	3	3	96,333.3	335	111.6		
Morris Run Coal Mining Co., .....	289,000	3	3	54,352.7	54,352.7	386	128.7	128.7
Kettle Creek Coal Mining Co., .....	163,158	1	6	333,592	5,569.9	750	125	125
Red Run Coal Co., .....	333,592	2	2	153,114	153,114	351	175.5	175.5
Frank Williams & Co., .....	306,228	1	1	107,095	225	225		
Joseph H. Reilly & Co., .....	167,095	1	1	151,675	287	287		
Kelly & Nugent, .....	151,675	1	1	103,847	209	209		
Rochester and Pittsburg C. and I. Co., .....	103,847	2	1	102,188	267	133.5		
Hall & Kaul, .....	12,048	1	1	12,844	39	22		
Harbison Walker Co., .....	204,376	1	1	12,844	30	57		
Matt. Schadeck, .....	19,242	1	1	12,844	30	50		
Long Valley Coal Co., .....	15,841	1	1	12,844	30	43		
W. F. Holt, .....	22,359	1	1	12,844	337	168.5		
J. F. Keating, .....	15,873	1	1	12,844	85	85		
A. G. Spears, .....	13,305	1	1	12,844	79	79		
Kersey Coal and Coke Co., .....	154,104	2	1	77,052	22	105		
Elk Coal Co., .....	27,679	1	1	27,679	45	45		
Cardiff Coal and Coke Co., .....	19,615	1	1	27,679	32	32		
Isaac Stage, .....	10,186	1	1	27,679	47	47		
Kelly Bros., .....	50,495	1	1	27,679	47	47		
Estate of W. J. Jackson, .....	22,498	1	1	27,679	47	47		
Karthauss Coal Mining Co., .....	9,100	1	1	27,679	47	47		
Clearfield & Grampian Coal Co., .....	24,000	1	1	27,679	47	47		
Total and average, .....	5,802,779	13	44	446,061.5	9,581	605.65		

Average production per employee, 605.65.

TABLE C—Classification of Accidents.

	Killed.	Injured.	Total.
By falls of coal, .....	4	6	10
By falls of roof slate, .....	7	17	24
By mine cars, inside, .....	1	17	18
By mine cars, outside, .....	1	1	2
By explosion of shots, .....	1	1	2
By careless handling of powder, .....	1	2	3
Total, .....	13	44	57

TABLE D—Occupations of Persons Killed or Injured.

	Killed.	Injured.	Total.
Miners, .....	13	29	42
Drivers, .....		7	7
Scrapers, .....		2	2
Machine runners, .....		2	2
Gripmen, .....		1	1
Rope riders, .....		1	1
Laborers, .....		1	1
Door boys, .....		1	1
Total, .....	13	44	57

TABLE E—Nationalities of Persons Killed or Injured.

	Killed.	Injured.	Total.
Americans, .....	2	9	11
English, .....		8	8
Welsh, .....	1		1
Irish, .....		3	3
Scotch, .....		3	3
Swedes, .....	2	4	6
Italians, .....	4		4
Poles, .....	2	6	8
Slavs, .....	1	7	8
Austrians, .....		2	2
Hungarians, .....	1		1
Germans, .....		1	1
Norwegians, .....		1	1
Total, .....	13	44	57





TABLE G—Giving name of mines, kind of opening, mode of ventilation, diameter of fan, size of furnace, power used with fan, capacity of fan or furnace, number of splits of air, cubic feet of air in each split, number of persons employed inside and number of cubic feet of air per minute for each employ inside in the Fourth Bituminous District, 1901.

Name of Mines.	Kind of opening.	Method of ventilation.	Diameter of fan in feet.	Size of furnace bars in square feet.	Power used to operate fan engines.	Total volume of air in cubic feet per minute, produced by fan or furnace.	Number of splits.	Number of Cubic Feet of Air in Each Split.				Number of persons employed inside.	Number of cubic feet of air per minute per employe.
								Split No. 1.	Split No. 2.	Split No. 3.	Split No. 4.		
Berwind shaft.	Shaft.	Fan.	52	79	Steam.	115,880	4	31,200	14,000	22,000	31,500	260	445
Catawba.	Drift.	Two furnaces.	52	79	Steam.	26,500	2	10,500	16,000			40	662
Helvetia.	Slope.	Fan.	25	79	Steam.	57,640	2	25,500	12,400			242	238
Rochester.	Drift.	Fan.	20		Steam.	62,400	2	35,600	26,800			323	190
Sandy Lick.	Drift.	Fan.	6		Compressed air.	24,800	1	24,800				40	620
Williamsport No. 2.	Drift.	Fan.	9		Steam.	15,600	1	15,600				145	107
Williamsport No. 6.	Drift.	Fan.	9		Steam.	32,600	1	32,600				102	329
Rayhold No. 1.	Drift.	Furnace.	24	64	Steam.	3,400	1	3,400				21	448
Rayhold No. 2.	Drift.	Furnace.	24	64	Steam.	15,800	1	15,800				43	523
Rayhold No. 3.	Drift.	Furnace.	24	64	Steam.	3,200	1	3,200				15	213
Charfield No. 1.	Drift.	Furnace.	13	54	Steam.	37,400	3	14,400	7,000	16,000		176	912
Moravian.	Drift.	Furnace.	54	54	Steam.	41,500	1	16,000	12,500	21,000		216	239
Pleasant Hill.	Drift.	Fan.	16	54	Steam.	49,500	1	19,600	21,900			145	286
Grasslat No. 10.	Drift.	Furnace.	54	54	Steam.	17,250	1	17,250				39	443
Grasslat No. 3.	Drift.	Furnace.	54	54	Steam.	26,250	1	6,000	20,250			70	350
Grasslat No. 11.	Drift.	Furnace.	54	54	Steam.	21,000	1	21,000				85	247
Knox Run No. 1.	Drift.	Furnace.	54	54	Steam.	13,250	1	13,250	11,800			127	197
Knox Run No. 2.	Drift.	Furnace.	54	54	Steam.	25,000	1	6,400				31	206
Brittanic.	Drift.	Furnace.	24	24	Steam.	8,120	1	8,120				26	185
Missouri.	Drift.	Furnace.	28	28	Steam.	3,300	1	3,300				41	238
Messiah.	Drift.	Furnace.	28	28	Steam.	13,440	1	13,440				120	388
Meyers Run.	Drift.	Furnace.	64	64	Steam.	23,440	2	13,300	8,800			177	271
Sugar Camp Nos. 7 and 12.	Drift.	Furnace.	64	64	Steam.	48,000	2	13,500	28,000			96	188
Sugar Camp Nos. 2 and 4.	Drift.	Furnace.	64	64	Steam.	18,000	2	12,400	5,600			49	457
Sugar Camp Nos. 5 and 8.	Drift.	Furnace.	90	90	Steam.	22,400	4	22,400				31	590
Sugar Camp No. 9.	Drift.	Furnace.	48	48	Steam.	18,200	1	18,200				21	714
Sugar Camp No. 10.	Drift.	Furnace.	48	48	Steam.	15,000	1	15,000				18	195
Sugar Camp No. 11.	Drift.	Furnace.	48	48	Steam.	3,500	1	3,500				28	285
Cato.	Natural.					8,000	1	8,000					
Cherry Run.	Drift.	Furnace.	32	32	Steam.	8,000	1	8,000					

TABLE G ventilation, etc., etc.,—Continued.

Name of Mines.	Kind of openings.	Method of ventilation.	Diameter of fan in feet.	Size of furnace bars in square feet.	Power used to operate fan engines.	Total volume of air in cubic feet per minute, produced by fan or furnace.	Number of splits.				Number of persons employed.	Number of cubic feet of air per minute per employee.
							Split No. 1.	Split No. 2.	Split No. 3.	Split No. 4.		
Snow Shoe No. 4.	Drift.	Furnace.	6	40	Electricity.	11,500	11,200				50	284
Snow Shoe No. 4.	Drift.	Furnace.	6	40	Electricity.	13,700	13,500				45	300
Kettle Creek No. 1.	Drift.	Fan.	6	40	Steam.	18,000	18,000				15	240
Kettle Creek Nos. 2 and 3.	Drift.	Fan.	12½	12½	Steam.	16,000	16,000				104	738
Pegasus No. 1.	Slope.	Fan.	8	30	Steam.	11,600	11,200		18,100		124	115
Pegasus No. 3.	Drift.	Fan.	8	30	Electricity.	27,250	27,250				129	215
Euclid.	Slope.	Furnace.	6	48	Electricity.	40,800	39,600	16,200			165	248
Euclid.	Slope.	Fan and furnace.	6	48	Electricity.	20,420	20,000	8,820			129	235
Clarton No. 27.	Drift.	Furnace.	6	54	Electricity.	21,000	21,000	11,400			70	332
Clarton No. 28.	Drift.	Furnace.	6	54	Electricity.	47,920	47,920				133	335
West Clarton Nos. 3 and 6.	Drift.	Fan and furnace.	6	40	Electricity.	29,800	16,800	17,000	16,120		51	584
Shawmut No. 1.	Drift.	Fan.	18	18	Steam.	43,000	7,600	7,920	9,800		106	409
Shawmut No. 5.	Drift.	Fan.	18	18	Steam.	62,900	19,200	16,400	14,200		108	378
Shawmut No. 6.	Slope.	Fan.	16	16	Steam.	15,000	4,250	5,700	8,050		119	378
Shawmut No. 8.	Drift.	Furnace.	32	32	Steam.	7,900	7,900				12	68
Shawmut No. 10.	Drift.	Furnace.	48	48	Steam.	28,680	3,250	6,300	7,800	8,420	64	448
Head Run No. 4.	Drift.	Furnace.	52	52	Electricity.	27,180	11,000	11,450			120	247
Hazel Dell.	Drift.	Furnace.	52	52	Electricity.	6,700	8,700				261	237
Byrne Nos. 1, 2 and 3.	Drift.	Two furnaces.	50	50	Electricity.	27,000	12,500	13,700	21,220		66	400
Elk No. 31.	Drift.	Furnace.	54	54	Electricity.	51,800	17,900	19,320			52	670
Carroll No. 41.	Drift.	Two furnaces.	64	64	Electricity.	109,000	27,000	11,000	48,720		424	296
Carroll.	Drift.	Fan.	12½	12½	Compressed air.	12,500	12,500				23	533
Coal Glen No. 1.	Drift.	Fan.	6	6	Compressed air.	42,620	12,600	9,800	9,200		112	389
Coal Glen No. 2.	Drift.	Two fans.	8	8	Gasoline.	21,600	16,400	9,800			150	150
Coal Glen No. 3.	Drift.	Fan.	6	6	Electricity.	11,600	11,600				38	300
Rattlesnake Run.	Drift.	Furnace.	15	15	Electricity.	32,400	18,000	14,400			91	345
Brown.	Drift.	Furnace.	35	35	Electricity.	45,000	21,000	21,400			155	233
Red Run No. 2.	Drift.	Fan.	6	64	Electricity.	22,000	20,200	12,000			65	338
Red Run No. 7.	Drift.	Fan.	6	6	Electricity.	26,100	26,100	11,400			80	394
Red Run No. 8.	Drift.	Fan.	6	6	Electricity.	12,600	12,600				30	420

Lyman, .....	Drift, .....	Furnace, .....	24	.....	4,200	1	4,200	.....	14	390
Insartor, .....	Drift, .....	Furnace, .....	32	.....	6,300*	1	6,300	.....	27	230
Arnot No. 1, .....	Drift, .....	Furnace, .....	36	.....	13,000	2	5,600	.....	124	104
Arnot No. 2, .....	Drift, .....	Natural, .....	.....	.....	22,400	2	5,200	.....	163	137
Arnot Nos. 3 and 5, .....	Drift, .....	Fan, .....	18	.....	76,500	3	22,000	.....	353	214
Arnot No. 7, .....	Drift, .....	Furnace, .....	40	.....	19,560	1	19,560	.....	79	247
Maple Hill, .....	Drift, .....	Furnace, .....	32	.....	6,800	1	6,800	.....	19	358
Bear Run, .....	Drift, .....	Fan, .....	.....	.....	47,200	2	19,200	.....	242	135
Jones No. 1, .....	Slope, .....	Fan, .....	14	.....	82,800	3	20,400	.....	600	123
New Mine, .....	Drift, .....	Furnace, .....	32	.....	24,800	1	4,800	.....	95	352
Anttrim No. 1, .....	Drift, .....	Fan, .....	.....	.....	32,600	1	32,600	.....	90	373
Anttrim No. 5, .....	Slope, .....	Fan, .....	20	.....	27,800	1	32,500	.....	165	230
Anna No. 2, .....	Drift, .....	Fan, .....	16	.....	20,500	1	20,500	.....	41	501
Long Valley, .....	Drift, .....	Fan, .....	6	.....	18,900	1	18,900	.....	39	485
Total and average, .....	.....	.....	.....	.....	.....	.....	.....	.....	8,459	*254.6

\*Average quantity of air produced per minute to each employee inside.

## Description of Fatal Accidents 1901.

Joseph Congelius was fatally injured in the Red Run No. 7 mine, on February 21, by a blast blowing through a pillar. The person who fired the shot claimed that he gave Congelius warning by rapping on the coal. I concluded if any warning had been given, it was misunderstood, and as neither were practical miners alone accounts for the accident.

Nicola Deddada was fatally injured by a fall of slate in the West Clarion mines, on March 14. He was taking out heading pillars, and the fall that caught the victim, came off the side of heading, which they had failed to secure; as it was very dangerous, great care was necessary on the part of the miners.

On April 4, Aaron L. Nelson was instantly killed by a fall of coal, in the Kettle Creek mines. Upon investigation, I found that he had taken the usual precautions, having had sprags set under the coal, but as it was very dangerous from the frequency of clay slips, he erred in undercutting too deeply, and sprags could not be depended on.

On April 13, John J. Hughes was so seriously injured by a fall of slate, in the Jones mine, that he died in a few hours after. He was turning a room off a heading, and had fired a shot in the coal, and returning began to trim down some coal the blast had left standing, which loosened the stone that fell upon him. The roof was very dangerous, and required constant care and systematic propping, which I believe he neglected.

Peter Gauzman was instantly killed, by a fall of coal in the Byrne mine, on April 19. He had fired a shot which failed to bring the coal down, and without taking any precaution he got under it to undermine it, when it fell upon him.

Coolerier Angelo was instantly killed by a fall of slate, in the Byrne mines, on May 14. He in company with another man was driving a heading, and in blasting the roof down they did not trim down the sides which became dangerous as the heading advanced. The mine foreman had instructed them to take the slate down, but this they neglected, and one of them paid the penalty with his life.

Thomas Taylor was instantly killed by a trip of cars in the Antrim No. 5 mine, on June 14. Two veins of coal are mined in this opening, and a plane is driven from the lower or Blossburg vein to the Cushing seam, and a double track is provided thereon. On the morning of the accident, Taylor and his son were ascending the plane to the upper vein where they worked. They had got about two-thirds way up, when a trip of cars broke loose from the top of the plane and caught both of them as they attempted to cross to the other side of the heading. If Taylor had kept his presence of mind, his boy would



not have been seriously injured, and his own life would have been spared.

Frederick Nelson was instantly killed at Shawmut No. 8 mine, on June 25, by a fall of slate. The victim and his partner were working in a heading, and had driven a cross-cut from the main heading to the airway or back heading, and a side cut was made by machine. Nelson was drilling a hole in this side cut, when a large stone fell upon him. I was in the mine, at the time and arrived at the place in a few minutes, and after questioning his partner and others, I concluded the accident was unavoidable, as the roof was considered safe.

Lewis Brososky was fatally injured by a fall of coal in the Kettle Creek mines on July 20. The victim was undermining the coal and neglected to use sprags and paid the penalty with his life.

James Taylor was fatally injured by a fall of slate, in the Eureka slope, on July 22. His injuries were not considered dangerous, and it was thought by attending physician that he would recover. He died however on July 29. The roof in his place was dangerous, and while he was a careful miner, he probably had not taken the precaution he should.

John Sakel was instantly killed by a fall of coal in the Sugar Camp Mines on October 1. His death was caused by his disregard of the usual precautions to prevent accidents from this cause, as provided for in the act of 1893.

On December 24, a very sad accident occurred in the Antrim No. 5 mine, in which Stacho Karchinskie and Patrick Wasnaik were fatally injured, by a fall of roof. They were employed in removing heading stumps, and were advancing on a stump of coal, and judging from the extent of the fall, considerable space had been left standing on props which no doubt fell without warning. The men had fired a shot, and had returned to load a car, when the place began falling, and while they were running to escape they were caught and covered under tons of rock, which held them prisoner for several hours. They died shortly after being taken home. An inquest was held, and the jury rendered a verdict of accidental death by a fall of roof and exonerated the company and employes from all blame.

### Improvements Made by Several Companies During 1901.

#### Berwind-White Coal Mining Company.

DuBois Shaft.—There were added to the equipment, one 26"x30" Norwalk air compressor, a Ramsey pusher or Ram, a fire pump and plugs, a new four roomed wash house for the employes, fitted with steam heat and hot and cold water. A supply house was also erected, its dimensions being 20x30 feet,



### Shawmut Mining Company.

Shawmut No. 6.—Installed one Thompson-Ryan dynamo and McEwen engine 200 K. W. or 260 H. P. One air shaft sixty feet deep, and 8x8 feet in the clear was sunk.

Shawmut No. 8.—Added one seven and one-half ton Baldwin-Westinghouse electric locomotive. Also installed one sixteen foot diameter Kenney fan.

### Red Run Coal Company.

Red Run Mine.—There were added to the equipment, one 200 H. P. McEwen engine, one 120 K. W. (Jeffrey) generator, and one Baldwin-Westinghouse electric locomotive.

### Joseph H. Reilly & Co.

Brock Mines.—A new tippie was erected with a thorough equipment for handling coal, viz: Pans and suspension scales. The pans are equipped with screens, and coal is weighed in a basket at place of dumping. One mile of railroad was built at considerable cost, also a tram road. A new power house was built, and two new 100 H. P. boilers installed. A new motor house, sand house, oil house and barn were also erected. Mine drainage was also improved during the year at considerable cost.

### McGee & Ellsworth.

Anna "S" Mine.—Besides the installation of a sixteen foot diameter Guibal fan, at this time, a new tippie and engine house were erected on the Antrim or East side of the valley, which is three-fourths of a mile from the mine. The coal from the mine will be brought over this valley to the tippie by the Bleichert system of aerial wire rope haulage. This system consists of two ropes supported on towers, placed at convenient distances. The ropes are used as rails for supporting the carriages, to which the buckets that hold the load are suspended. The ropes are eight feet seven inches apart, and are the same as a double tracked railway. The rope for the loaded buckets is one and three-eighth inches in diameter, and the one for the empty buckets is one inch in diameter. The towers between the tippie and the loading terminal station are eight in number, besides the double tension station which is located 2,300 feet from the tippie, and at a point where the strain can be applied to the ropes to keep them at a desired tension. The double tension station is a structure fifty-one feet long, and the ropes from the tippie and loading station are attached to large boxes loaded with stone, two boxes having a capacity of 300 cubic feet, and two 180 cubic feet each. The larger

boxes are attached to the rope conveying the loaded buckets, and the smaller ones to the rope conveying the empty buckets. The buckets are taken over this fifty-one feet by means of an iron or steel rail. The towers are at various distances apart. The longest span is between the double tension station and No. 3 tower on the west side, which is 1,000 feet from the center of these structures. No. 3 tower is 240 feet higher than the double tension station, and the ropes are more than 100 feet higher than the bed of the creek where they cross it. The traction rope which moves the carriages on this aerial railway is an endless one, five-eight inches in diameter, and runs between the carrying ropes at a gauge of eight feet. The power that operates this tramway is a pair of horizontal steam engines.

Anna "S" Mine.—Engines, cylinders 11"x14". Steam is furnished by one tubular boiler forty-four inches in diameter and fourteen feet long. Nineteen horse power required to operate the system. The engines are connected to the traction rope by means of belts, pulleys and beveled gear wheels. The carriages were planned to travel at a speed of 250 feet per minute, but it is now thought that the speed will be increased to perhaps 350 feet. The traction rope is kept from slipping by means of a grip wheel. The way in which the carriages are sent out at the terminal stations is a very ingenious one, and is automatic, the clutches gripping the ropes automatically as the buckets are pushed through the attachers, and the carriages unclutching as they come into the terminals through the detachers.

### Description of Mines.

#### Clearfield County Mines.

Berwind Shaft.—The condition of this colliery has been good on each of my visits. A good volume of air was provided, which was well conducted through the several splits, in sufficient quantities to keep the workings in a safe, and healthful condition. Mining is confined entirely to the south side of the mine, and considerable pillar drawing has been done during the year, the intention being in future to remove all pillars as far as practicable, as the workings advance. A new side track was laid, and the rope haulage extended 1,000 feet during the year.

Cataract.—The condition of these openings was very fair considering the difficulty in maintaining ventilation and drainage in such mines, where only pillar drawing is done. There has been much idle time at these mines during the year, and but few persons have been employed.

Helvetia Mine.—The conditions of this mine have been very fair on each visit. A reasonably good current of air was circulating around the workings, and considering the quantity of water this

mine makes, and the difficulty experienced in handling it, the workings were fairly well drained.

**Rochester Mine.**—A lawful volume of air was measured on the inlet, which was fairly well conducted throughout the workings. The mine was also reasonably well drained. The main headings have been cut out by a sand rock fault during the latter part of the year, and boring from the surface was being done, to ascertain the probable thickness of same, but in all probability it will shorten the life of this mine very much.

**Sandy Lick.**—This is part of the Rochester Mine, but has a separate haulage, and is independently ventilated. Only a few persons were employed, who were mining out the remaining pillars. On each of my visits, I found the mine in a reasonably good condition for ventilation and drainage.

**Williamsport No. 2.**—This mine has not been in a very satisfactory condition for ventilation during the year. The new hauling road made during the year, is also being used for an intake airway. It was thought by the management, that when this had been done, the question of ventilation would be solved, I however had no faith in it, believing that power is necessary as well as airways. However, the airway is in line with the improvements necessary, and if a fan of ample capacity is provided, and placed at a point more in line with the present workings, some improvement may be expected.

**Williamsport No. 6.**—The condition of this mine for ventilation, throughout the year was fair. The small Stine fan was giving fair results, but the volume of air at the face of some parts of the workings was rather sluggish and the headings were somewhat smoky.

**Fairmount No. 1.**—This mine is located on the Tyrone and Clearfield Branch of the Pennsylvania Railroad. During the past year it was transferred from the Eighth district to this district, and is at present operated by the Harbison Walker Company. On my inspections, I have found it in a reasonably good condition for ventilation and drainage.

**Raybold No. 2.**—This is a small operation, with only a few persons employed. Some defects were found in the ventilation and drainage, which can be attributed to the frequent changes of mine foremen. I having found a new man at each of my visits.

**Grampian No. 1.**—A lawful volume of air was found on the return near the furnace, but it was not being properly conveyed to the working faces; other conditions could not be complained of. Frequent changes of mine foremen here is a great hindrance to keeping the mine in a good sanitary condition.

**Clearfield No. 10.**—Is a small opening, and coal for domestic purposes only is mined, and but few persons are employed, especially during the summer months, when fewer than ten persons are employed. The condition of the mine for ventilation is only fair.



Moravian, Pleasant Hill, Grass Flat and Knox Run mines are located on the New York Central and Hudson River Railroad near the town of Peale, and are operated by the Clearfield Bituminous Coal Corporation, and have been operated very steadily during the year. The condition of the Moravian mine was good. A furnace is located near the face of the workings, which was producing a lawful volume of air, which was being reasonably well conveyed to the face of the headings. Considerable work has been done during the year in draining the workings, by cutting a drain to the Pleasant Hill mine. The Pleasant Hill mine was in good condition on each inspection. A good volume of air was being provided, which was reasonably well conducted through the headings. Some defects were found in drainage which is difficult to maintain, owing to the irregularity of grade of the seam. The Grass Flat mines are ventilated by two furnaces and a fan. The No. 10 opening is quite extensive, and a long tail rope system of haulage is used to convey coal to the surface. A lawful volume of air, was being provided, which was well conducted around the workings. The No. 9 opening, has a good volume of air in circulation. Some difficulty is experienced in this mine with water, consequently some defects were found in the drainage. The No. 11 drift was in a very fair condition generally. The Knox Run No. 1 drift is in very fair condition for ventilation, but if the furnace were located at some point where a greater depth of shaft would be obtained, it would improve the ventilation very much. The No. 2 drift was found in fair condition for ventilation and drainage.

Brittanic Mine.—A new furnace was built during the year, and the condition of the mine improved thereby. No work was done in this mine for several months, owing to the change of grade on the railroad in the vicinity of the tippie.

Mt. Carmel.—Did not have a sufficient number of employes during the year to come under the law, but was inspected and found in good condition.

Mosquito Mine.—This mine changed hands during the year, and is now operated by Matt. Shadick. Its condition for ventilation and drainage is not good, but I expect that some improvements will be made by the new owners.

Meyers Run.—This mine was in good condition generally.

#### Centre County Mines.

Sugar Camp Nos. 2-4-7 and 12.—These openings were in a very fair condition. They are ventilated by two furnaces which produced a good volume of air, which was being well conveyed to the face of the workings. Drainage was also good.

Sugar Camp Nos. 5 and 8.—The ventilation in the No. 5 was not up to the required standard, the furnace being too far from the present

workings, and there were too many doors in use. Some changes were being made on my last visit, which will improve the ventilation. Only a few persons were employed in the No. 8 opening, but it was in very fair condition.

Sugar Camp Nos. 9-10 and 11.—These openings are ventilated by three furnaces, which were producing good volumes of air, which was being conveyed to the workings in sufficient quantities to keep them in a healthful condition. The drainage was also well looked after.

Cato Mine.—Is a small operation and but few persons employed. The ventilation and drainage is not up to the required standard, but I hope to find some improvement on my next visit.

Cherry Run.—The airways in this mine are not kept up as they should be, and in consequence the ventilation is defective in some parts of the mine. The drainage was somewhat improved on my last visit.

Snow Shoe Nos. 4 and 5.—On my first visit to the No. 4 mine, I found that the brattices in one part of the mine had become worthless from long use, but they have since been renewed, and the ventilation improved. The No. 5 drift was found in a reasonably good condition for ventilation and drainage.

#### Clinton County Mines.

Kettle Creek Nos. 1-2 and 3.—The No. 1 drift is ventilated by a furnace that was producing a lawful volume of air, which was being conveyed around the workings in sufficient quantities to keep them in a reasonably good condition. The Nos. 2 and 3 drifts are ventilated by a fan, which is run by a steam engine; the gas engine formerly used has been dispensed with, and much better results are obtained. The seam here is sufficiently high to make large airways, and a good volume of air is produced with a low water gauge, which is reasonably well conducted throughout the workings. Some trouble has been experienced from water during the latter part of the year, caused by heavy rains, and in consequence the workings were rather wet on my last visit. There had been no idle time at these mines during the entire year.

#### Elk County Mines.

Dagus No. 1.—The tippie at this mine, together with the engine and boiler rooms, were destroyed by fire on December 17. The fire was supposed to have originated in the boiler room in some unknown manner. Rebuilding was at once begun, and the company expect to be ready to resume work by March 1, 1902. The condition of this mine on my last visit was good. The workings were reasonably well ventilated and drained.



Dagus No. 3.—Preparations were being made at this mine to install rope haulage in the dip workings and a side track in the mine was about completed, and some outside work was in progress. The mine was as usual in good condition.

Eureka Slope.—This mine was found in a fair condition during the entire year. A reasonably good current of air was being conducted throughout the workings, and the drainage could not be complained of. The south face headings were being driven towards No. 19 drift, and when cut through, a furnace in the latter opening, will be utilized to ventilate the workings on the south side of the mine, which will improve the conditions very much.

Clarion No. 27.—This mine was found in good condition on each visit during the year. The air current was well conducted, and the workings very well drained.

Clarion No. 29.—The use of coal cutting machines has been done away with in this mine, as the work is confined almost entirely to the drawing of pillars, at which work it is impracticable to use machines. The mine is supplied with a fair volume of air, which is very well conducted through the workings.

Shawmut Nos. 1-3 and 4.—These openings were found in a reasonably good condition throughout the year, considering that mining is wholly confined to pillar drawing. They were in good condition as regards ventilation and drainage.

Shawmut No. 5.—Some improvement has been made by increasing the width of the hauling roads during the year, which were too narrow for the use of electric motors, making it dangerous, and also retarding the air current to a great extent. The condition of the mine generally is being improved by the present management.

Shawmut No. 6.—A washout was encountered in the main south headings cutting out nearly the entire vein, leaving a deposit of sand and gravel. At considerable expense and labor a heading has been driven through it, where coal has been again found at its normal height, and a shaft is being sunk for ventilation in this part of the mine. A new generator has been installed, and preparations are being made to use electric motors in hauling coal from the headings, to the bottom of slope. The mine is in good condition for ventilation, but the drainage was somewhat defective on the hauling roads when last visited.

Shawmut No. 8.—An air shaft 8'x8' in the clear has been sunk during the year, and a sixteen foot diameter Guibal fan has been placed thereon, and the mine now ranks among the best in the district for ventilation. This is the only proper method of ventilating mines, especially those in which coal cutting machinery is used.

Shawmut No. 9.—Only a very few persons were employed in this mine during the year, but its condition for ventilation and drainage was good.

Shawmut No. 10.—A lawful volume of air was measured in this mine, which was defective in some of these headings; owing to the number of splits the velocity of the current was rather weak. Other conditions were good.

Mead Run No. 2.—On my last visit only five persons were employed but it was in fair condition.

Mead Run No. 4.—This mine on each visit was in very fair condition for ventilation and drainage.

Hazel Dell.—During the summer months not much work is done in this mine, and but few persons employed. Its condition for ventilation and drainage is fair.

Byrne Nos. 1-2 and 3.—The condition of this mine has been good throughout the year. Two furnaces produce ventilation, and a good current has been found on each visit. The field here is quite extensive, and a fan will be necessary in the near future, to insure ample ventilation. The main No. 1 heading, which is the lowest part of the workings is being pushed as rapidly as possible to the Caledonia side of the mountain for the purpose of drainage where a system of rope haulage will be installed.

Winslow No. 31.—This mine was opened during the year and is a drift opening. Two drifts were opened the distance required by law, and the double entry system, with room and pillar is the plan of mining. A furnace is provided for ventilation, and while no complaints can now be made regarding air, yet the furnace at its present location will not suffice for future developments. The "B" or Lower Kittanning seam is being mined here.

Cardiff Nos. 1 and 2.—These are new mines opened during the year on the double entry, and room and pillar system in the Lower Kittanning seam. Each opening is provided with a furnace for ventilation, and on my visit a reasonably good volume of air was circulating through the workings.

#### Jefferson County Mines.

London.—Coal cutting machinery is almost exclusively used in this mine, there being but a very small percentage of the production mined by pick, consequently a large volume of air is necessary to keep the workings clear of powder smoke. The Capell fan installed during the year 1900, is producing a very good volume of air, which was being conducted in three separate currents, and was conveyed to the workings in sufficient quantities to meet requirements. The drainage could not be complained of.

Pancoast.—But few persons were employed in this mine on my last visit, but the mine was in fair condition for ventilation and drainage.

Coal Glen No. 1.—Some defects were found in ventilation, in the new drift which can be attributed to the use of compressed air the power used in running the fan engine, which is very unreliable. As this opening becomes developed, the ventilating apparatus will have to be strengthened so as to insure a regular current of air. The other drifts are in very fair condition for ventilation and drainage.

Coal Glen No. 2.—This opening was in fair condition for ventilation and drainage.

Beechtree No. 2.—Only a few persons are employed in this mine, who are engaged in removing the main pillars. The ventilation was sufficient to meet the requirements.

West Clarion No. 1.—There is nothing new to report regarding the mine, only that it was in its usual good condition.

West Clarion Nos. 3 and 6.—A new water-course was driven to the surface, which dispensed with considerable labor, and expense in pumping. The roof over part of the mine is very tender, and it requires great care on the part of the officials, and the miners to prevent accidents. The mine is very well ventilated and drained. A new opening was made during the year, known as the No. 6. It is opened on the double entry system and ventilated by a furnace of ample capacity.

Brock.—Two furnaces are in use at this mine, and a lawful volume of air is being provided, which was very well conducted to the working faces. The mine was well drained.

Rattlesnake Run.—This mine is in very fair condition as to ventilation and drainage.

### Lycoming County Mines.

Red Run No. 2.—The vein being mined here is very low, and in consequence the airways are small in sectional area. A lawful volume of air can always be measured in the mine, but some of the workings do not have sufficient to keep them in the best condition. The drainage is always good.

Red Run No. 7.—The vein here is also very low, and the same fault can be found as in the No. 2 mine, but some improvement has been made by increasing the size of overcasts and in cleaning up the airways. The drainage is very good.

### McKean County Mines.

Lyman.—On my last visit only a few persons were employed, and it has been idle a great part of the year. Its condition for ventilation and drainage is fair. The Instantan mine was idle at the time of my last visit, and I understand it has been abandoned since, and the track taken out of the mine,

### Tioga County Mines.

Arnot No. 1.—The ventilation in this mine has been improved during the year and the officials in charge are doing all that can be done, with the means at hand to produce a lawful volume of air. The furnace at its present location is entirely inadequate to meet the requirements. The drainage is in fair condition.

Arnot No. 2.—This mine is ventilated by natural means, and the conditions are very favorable for such, but it is too unreliable and not in accordance with the law. A shaft has been enlarged and re-timbered and a fan will be installed in the near future, which will provide ample ventilation. It is reasonably well drained.

Arnot Nos. 3 and 5.—A new haulage road has been laid on the east side of the mine, where pillars are to be removed. Ventilation and drainage are very good.

Arnot No. 7.—Nothing new can be reported concerning this mine, except that it is well looked after. It was in good condition as to ventilation and drainage.

Bear Run.—This mine on each visit has been in a very fair condition. An opening is being driven from No. 15 left heading to the surface, for the purpose of ventilation, which when completed will remedy the defect in ventilation in this part of the mine.

Maple Hill.—Has been idle nearly the entire year. When I last visited it, it was in a very fair condition.

Jones No. 1.—Is in a fair condition, some defects were found in ventilation on my last visit in some of the headings, yet there is a lawful volume of air provided, but a good part of it is lost through the brattices before it reaches the workings. The slope still continues to be driven to the Seymour vein and will soon reach that seam of coal, when it will be mined.

New Mine.—There is nothing of importance to report concerning this mine, as it is in its usual condition, regarding ventilation and drainage.

Antrim No. 1.—This mine still continues to give off considerable black damp from the old workings, but some improvement has been made to prevent it from vitiating the air, by bratticing. There is a fair volume of air circulating through the mine, and the drainage is also fair.

Antrim No. 5.—The direction of the air current in this mine, was changed during the early part of the year to prevent it from being contaminated by black damp, which is very prevalent. This change, while it did not meet my expectations, proved very beneficial, as the air current was much purer than formerly. The condition of the mine generally was fair.

Anna "S" Mine.—The company has during the past year been engaged in reopening this mine, which is located a little more than



three-fourths of a mile from the No. 1 mine tippie, in a westerly direction. A valley 425 feet deep lies between the mine, and tippie, over which the coal will be conveyed by an aerial wire rop tramway system, a description of which is given in another part of this report. When I visited the mine, but few persons were employed, and no system of ventilation had been established, but preparations were being made to install a fan, which has since been completed.

### Bradford County Mines.

Long Valley No. 3.—The condition of this mine for ventilation and drainage, on each of my visits was good.

#### Examination of Candidates for Mine Foremen and Fire Bosses Certificates.

The annual examinations of applicants for certificates of competency for mine foreman and fire bosses, as per act of Assembly approved May 15, 1893, was held in this district in the month of January of each year, from 1893 to 1901 inclusive. The board of examiners was composed of the Mine Inspector of the district; George L. Miller, superintendent, and James C. Hadley, mine foreman. During those years 164 applicants were examined, and the following named persons were granted certificates:

#### First Grade Certificates.

John Britt, Clarion; John McNulty, South Fork; John W. Donaldson, South Fork; James Craig, Elenora; John Reed, DuBois; Anton Hardt, Wellsboro; D. B. Dunsmore, DeLancy; Josiah Gregory, DeLancy; Hugh Reynolds, DuBois; William Reed, DuBois; John Hurley, Fayette; Timothy McCarthy, DuBois; John Clark, DuBois; J. C. McDermott, DuBois; James Harvey, DuBois; John Harrison, DuBois; George Brown, DuBois; Thos. D. Reed, DuBois; Robert North, DuBois; John Pendelton, Crenshaw; W. H. H. Miller, Bitumen.

#### Second Grade Certificates.

Danl. T. Jenkins, Blossburg; Thos. S. Heron, Arnot; John Sheenhen, Patton; James Brownlee, Red Run; Andrew Spence, Bernice; David Simpson, William Reed, DuBois; John B. Ryan, DuBois; John E. Burns, DuBois; Chas. Hill, ; Archie Donaldson, Crenshaw; Alex. Pride, Arnot, Wm. B. Gilmore, Blossburg; James Adamson; James F. Keating, Clermont; J. F. Fuge, Walston; Robt. Quigley, Westville; John Quigley, Westville; James F. Cleary, Beechtree; Chas. Hill, Helvetia; David Trout, Coal Glen; Wm. H. Patterson, Tyler; James Forsythe, Glen Richey; David T. Riordan, Arnot; Robt. Guy, Bernice; Arnold Hurst, Antrim; Jas. F. Ward, Ehren-



feld; J. E. Ashley, Lindsay; T. R. Johns, Walston; H. S. Rogers, Spangler; Edward Nichlinson, Hastings; A. J. Johnson, DeLancy; Ernest Coupe, Antrim; John M. Jones, Coal Glen; Robt. Christy, Arnot; Lawson Blankinsepp; Samuel Walwork; Rees James; Alexander Stewart, DeLancy; H. P. Kelly, Snowshoe; Thomas Stratten; R. J. Makan; James Moran; William E. Dayton; John F. Nelson, Arnot; Geo. Nichlinson, Hastings; William Nichlinson, Hastings; E. R. Musser; John M. Cowan, Antrim; John Clifford, Antrim; Hugh Gibb, Walston; Fred. Norman, Brockwayville; James P. Fleming, Kersey; R. M. Ent, Brockwayville; John T. Jones, Punxsutawney; Alexander Penman, Westville; James Jones, Cartwright; James Heaney; Cataract; John R. Hayes, Glen Campbell; W. C. Smith, Glen Glade; James A. Shaw, Blossburg; James Ewing, Wishaw; D. J. Lewis, Helvetia; Joseph Madill, Anita; James Turnbull; Ira Williams; John W. Ditchburn; Thos. Fish; John McFarlane, Arnot.

#### Fire Boss Certificates.

Hugh Reynolds, Red Burn; Timothy McCarthy, DuBois; A. L. Christian, DuBois; Archie Donaldson, Crenshaw; Robert North; William Chick; Joseph Kennedy, DuBois; James Pratt, DeLancy; Chas. S. Cowie, Punxsutawney; John Wallace, DeLancy; George Brown, Falls Creek; Thomas Hamilton, Elenora; Alexander Wise, DeLancy; William Haddick, Punxsutawney; William Ledger; Alfred Dawson, DuBois; James Harvey, DeLancy; John Hall, Walston.

Each session of the board was held in the court house, Williamsport, the last session having been held on January 2d, 3d and 4th, 1901. There were thirty-two applicants examined, twenty-one of whom were successful, three of them obtaining certificates of first grade, and seventeen second grade; one fire boss certificate was also issued. The names of the successful applicants at this examination are all included in the above list.

TABLE I—Showing Names of Operators, Railroads, etc., and location of collieries in the Fourth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>North Western Mining and Exchange Co.</b>						
Pagosa No. 1.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie.
Pagosa No. 2.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie.
Pagosa No. 3.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie.
Barren slope.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie.
Barren Nos. 5, and 24.	Elk.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie.
Ward Clinton Nos. 1, 3 and 6.	Jefferson.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	Erie.
Battlestone Run.	Jefferson.	Joseph Bailey.	Brockwayville.	Joseph Bailey.	Brockwayville.	P. R. R. R. and C. Branch.
<b>Jefferson and Clearfield Coal and Iron Co.</b>						
Rochester.	Clearfield.	L. W. Robinson.	Punxsutawney.	John Reed.	Reynoldsville.	R. & F. C. Branch B. R. & P.
London.	Jefferson.					
Pinecroft.	Jefferson.					
Sandy Lick.	Clearfield.					
<b>Clearfield Bituminous Coal Corporation.</b>						
Grass Flat.	Clearfield.	R. A. Shillingsford.	Clearfield.	R. A. Shillingsford.	Clearfield.	N. Y. C. & H. R. R. R.
Knox Run.						
Phlox Hill.						
Moravian.						
<b>Shawmut Mining Co.</b>						
Shawmut No. 1.						
Shawmut No. 5.						
Shawmut No. 6.						
Shawmut No. 8.						
Shawmut No. 9.						
Shawmut No. 10.						
Mead Run No. 2.						
Mead Run No. 4.						
<b>Lehigh Valley Coal Co.</b>						
Sugar Camp No. 2.						
Sugar Camp No. 4.						
Sugar Camp No. 5.						
Sugar Camp No. 7.						
Sugar Camp No. 8.						
Sugar Camp No. 9.						
Sugar Camp No. 10.						
Sugar Camp No. 11.						
Sugar Camp No. 12.						
<b>Centre, S. D. Warriner, Wilkes-Barre.</b>						
	Centre.	S. D. Warriner.	Wilkes-Barre.	J. F. Marsteller.	Snow Shoe.	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Barwood White Coal Mining Co. Beaumont shaft. Cateract.	Clearfield, Clearfield.	Thos. Fisher. Thos. Fisher.	Philadelphia. Philadelphia.	A. J. Cook. A. J. Cook.	DuBois. Belleville.	Pennsylvania Railroad. Pennsylvania Railroad.
Blossburg Coal Co. Arnot No. 1. Arnot No. 2. Arnot No. 3. Arnot No. 4. Bear Run. Maple Hill.	Tioga.	F. B. Lincoln.	Arnot.	F. B. Lincoln.	Arnot.	Tioga Div., Erie R. R.
Morris Run Coal Mining Co. Jones No. 1. New Mine No. 2.	Tioga, Tioga.	W. S. Searing. W. S. Searing.	Morris Run. Morris Run.	W. S. Searing. W. S. Searing.	Morris Run. Morris Run.	N. Y. C. & H. R. R. R. N. Y. C. & H. R. R. R.
Kettle Creek Coal Mining Co. Kettle Creek No. 1. Kettle Creek Nos. 2 and 3.	Clinton, Clinton.	Geo. L. Miller. Geo. L. Miller.	Bitumien. Bitumien.	James Ward. James Ward.	Bitumien. Bitumien.	S. & E. R. R. S. & E. R. R.
Jefferson Coal Co. Coal Glen No. 1. Coal Glen No. 2. Beechtree No. 2.	Jefferson.	Austin Blakeslee.	Coal Glen.	Austin Blakeslee.	Coal Glen.	Buffalo, Rochester & Pittsburgh
Magee and Ellsworth. Antrim No. 1. Antrim No. 2. Antrim No. 3. Antrim No. mine.	Tioga.	William Howell.	Corning, N. Y.	James Pollock.	Antrim.	N. Y. C. & H. R. R. R.
Frank Williams & Co. Williamsport No. 2. Williamsport No. 6.	Clearfield, Clearfield.	J. G. Dunsmore. J. G. Dunsmore.	Tyler. Tyler.	J. G. Dunsmore. J. G. Dunsmore.	Tyler. Tyler.	Pennsylvania Railroad. Pennsylvania Railroad.
Red Run Coal Co. Red Run No. 1. Red Run No. 2. Red Run No. 3. Joseph H. Rely & Co. Brook.	Lycoming, Lycoming.	D. B. Allison. D. B. Allison.	Roaring Branch. Roaring Branch.	D. B. Allison. D. B. Allison.	Roaring Branch. Roaring Branch.	Northern Central R. R. Pennsylvania Railroad.
Hall & Kaul. Hazel Dell.	Elk.	Andrew Kaul.	St. Marys.	Andrew Kaul.	St. Marys.	Pittsburg, Shawmut & Northern

Harbison Walker Co. Fairmount, .....	Clearfield, .....	H. M. Kurtz, .....	Woodland, .....	J. M. Baker, .....	Woodland, .....	Pennsylvania Railroad.
Mott Schadeck Mosquito Creek Mine. Long Valley Coal Co. Long Valley No. 3, .....	Clearfield, .....	.....	.....	Matt Schadeck, ..	Karhaus, .....	Pennsylvania Railroad.
W. F. Holt. Cherry Run, .....	Bradford, ....	O. A. Baldwin, ....	Towanda, .....	R. E. Dunston, ....	Towanda, .....	Barclay Railroad.
Rochester and Pittsburgh Coal and Iron Co. Helvetia No. 2, .....	Centre, .....	W. F. Holt, .....	Philpsburg, .....	W. F. Holt, .....	Philpsburg, .....	Pennsylvania Railroad.
J. F. Keating. Leman, Instantier, .....	Clearfield, .....	L. W. Robinson, Pres. & Gen. Mgr. A. H. Bowman, Asst. Gen. Mgr.	Punxsutawney, Punxsutawney, }	T. S. Lowther, ....	Helvetia, .....	Buffalo, Rochester & Pittsburg.
A. G. Spears. Meyer Run, .....	McKean, McKean, .....	.....	.....	J. F. Keating, J. F. Keating, ....	Clermont, Clermont, .....	W. N. Y. & P. W. N. Y. & P.
Kersey Coal and Coke Co. Pyrne Nos. 1, 2 and 3, .....	Clearfield, .....	.....	.....	A. G. Spears, .....	Karhaus, .....	Pennsylvania Railroad.
Elk Coal and Coke Co. Elk No. 31, .....	Elk, .....	Geo. S. Ramsey, ..	St. Marys, .....	R. Dawson Hall, ...	Weedville, .....	Pittsb'g, Shawmut & Northern.
Cardiff Coal and Coke Co. Cardiff No. 41, .....	Elk, .....	Geo. S. Ramsey, ...	St. Marys, .....	R. Dawson Hall, ...	Weedville, .....	Pittsb'g, Shawmut & Northern.
Kelly & Nugent. Cato, .....	Elk, .....	Geo. S. Ramsey, ...	St. Marys, .....	T. G. Mathews, ....	Weedville, .....	Pittsb'g, Shawmut & Northern.
Isaac Stage. Clearfield No. 10, .....	Centre, .....	.....	.....	L. Nugent, .....	Snow Shoe, .....	N. Y. C. & H. R.
Kelley Bros. Snow Shoe No. 4, .....	Clearfield, .....	.....	.....	Isaac Stage, .....	Clearfield, .....	None.
Snow Shoe No. 3, .....	Centre, .....	M. D. Kelley, .....	Snow Shoe, .....	H. P. Kelley, .....	Snow Shoe, .....	Pennsylvania Railroad.
Estate of W. J. Jackson. Gramplan No. 1, .....	Centre, .....	M. D. Kelley, .....	Snow Shoe, .....	H. P. Kelley, .....	Snow Shoe, .....	Pennsylvania Railroad.
Karhaus Coal Mining Co. Brittain, .....	Clearfield, ....	A. Jackson, .....	Gramplan, .....	Edward Huebs, ...	Gramplan, .....	Pennsylvania Railroad.
M. Burns. Rayhold No. 2, .....	Clearfield, ....	.....	.....	George Rees, .....	Karhaus, .....	Pennsylvania Railroad.
.....	Clearfield, ....	.....	.....	M. Burns, .....	Brisbin, .....	Pennsylvania Railroad.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Fourth Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by												
		rail or otherwise.												
		Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number of days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.	
Jefferson and Clearfield Coal and Iron Co.														
Rocheater.	Clearfield.	222,553	.....	222,553	.....	.....	216	287	.....	1	.....	.....	31	
Samty Lick.	Jefferson.	133,464	.....	133,464	.....	.....	202	47	.....	.....	.....	.....	39	
Laurel.	Jefferson.	33,179	.....	33,179	.....	.....	202	23	.....	4	.....	.....	8	
Panacet.	Jefferson.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Total.	.....	767,223	.....	767,223	.....	.....	211.3	859	.....	5	.....	.....	73	
N. W. Mining and Exchange Co.														
Darius No. 1.	Elk.	341,198	5,614	341,198	349,416	.....	205.7	627	1	.....	2,575	4,750	46	
Darius No. 2.	Elk.	.....	2,604	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Eureka slope.	Elk.	198,277	598	198,277	200,358	.....	213.4	348	.....	.....	1,640	100	36	
Clarion No. 27.	Elk.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
West Clarion No. 1.	Jefferson.	187,259	1,046	187,259	188,766	.....	225.4	240	1	1	1,800	1,226	23	
West Clarion No. 2.	Jefferson.	.....	261	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
West Clarion No. 3.	Jefferson.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
West Clarion No. 4.	Jefferson.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
West Clarion No. 5.	Jefferson.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
West Clarion No. 6.	Jefferson.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rattlesnake Run.	Jefferson.	68,391	29	68,391	68,427	.....	159.9	103	.....	.....	600	.....	5	
Total.	.....	765,125	7,287	765,125	806,767	.....	201.1	1,318	2	1	6,575	6,086	110	



Clearfield Bit. Coal Corporation.											
Grass Flat No. 9.	148.204	784	991	132.449	20,847	273	276	1	1,840	700	19
Grass Flat No. 10.											
Grass Flat No. 11.											
Knox Run No. 1.											
Knox Run No. 2.											
Clearfield.	134.102		223	134.235	20	150	227		2,280	900	13
Clearfield.	138.611	150	1,600	138.351	308	249	229		1,200	125	17
Clearfield.	115.712		190	115.902		250	159	1	1,685	800	12
Clearfield.											
Moran.											
Total.	535.629	994	3,004	582.037	21,235	254.5	921	2	6,988	2,525	61
Shawmut Mining Co.											
Shawmut No. 1.	41.751	12	4,030	45.793		200	62		390		7
Shawmut No. 5.	82.747	2,575	501	85.883		220	125		429	1,250	15
Shawmut No. 6.	82.587	2,778		85.365		255	128				
Shawmut No. 8.											
Shawmut No. 9.	144.844	5,002	1,923	151.779		206	229	1	1,043	240	2
Shawmut No. 10.											
Meed Run Nos. 2 and 4.	91.790	34	142	91.956		183	138		837	100	26
Total.	443.719	10,401	6,666	460.756		206.8	682	1	3,204	1,615	50
Blossburg Coal Co.											
Arnot No. 1.	47.092	250	400	47.673		133	133				9
Arnot No. 2.	49.684	350	550	50.537		133	178	1			12
Arnot No. 3.	63.137	750	750	67.97		139	239				12
Arnot No. 5.	73.215	1,100	1,250	75.565		139	239				18
Arnot No. 7.	26.241	1,275		26.516		142	88				8
Bear Run.	92.591	1,853	192	94.636		132.2	276				2
Maple Hill.	2.626			2.626		205	21				2
Total.	354.507	4,778	3,142	362.427		146.2	1,077	1			61
Lehigh Valley Coal Co.											
Sugar Camp No. 2.	321.123	1,247	1,456	323.532		200	198.8	435	1	2,500	35
Sugar Camp No. 3.	87.432	230	79	87.801			161.1	104	3	500	5
Total.	408.621	1,477	1,535	411.633		200	180	539	1	3,000	40
Derwind-White Coal Mining Co.											
Derwind shaft.	220.981	18,009	11,918	250.908			231	288	11	1,250	20
Catawba.	29.516	672		30.188			217	43	1	400	12
Total.	250.497	18,681	11,918	281.096			234	331	12	1,650	32
Jefferson Coal Co.											
Coal Glen No. 1.	232.000	2,700	1,300	227.000			269	293	3	2,000	30
Coal Glen No. 2.	52.000			52.000			257.4	42		350	4
Beechtree No. 2.											
Total.	285.000	2,700	1,300	289.000			263.2	335	3	2,350	34

TABLE II.—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number of days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
<b>Magers &amp; Ellsworth.</b>														
Antrim No. 1, .....	Thoga.	161,644		1,414	163,058			215	120					8
Anna No. 3, .....	Thoga.							224.8	217	3	3			13
Anna No. 5, .....	Thoga.							152	49					1
Total, .....		161,644		1,414	163,058			155.9	386	3	3			22
<b>Morris Run Coal Mining Co.</b>														
Jones No. 1, .....	Thoga.	327,355	2,000	4,237	333,582			361.1	750	1	5	9,500	400	109
New Mine No. 2, .....	Thoga.										1			
Total, .....		327,355	2,000	4,237	333,582			361.1	750	1	6	9,500	400	109
<b>Kettle Creek Coal Mining Co.</b>														
Kettle Creek No. 1, .....	Clinton.	306,228			306,228			310.1	351	2	2	2,481	29.6	40
Kettle Creek Nos. 2 and 3, .....														
<b>Red Run Coal Co.</b>														
Red Run No. 2, .....	Lycoming.	165,229	800	975	167,025			257.3	225	1		3,826	580	2
Red Run No. 7, .....														
Red Run No. 8, .....														
<b>Frank Williams &amp; Co.</b>														
Williamsport No. 2, .....	Clearfield.	194,678	2,142	1,038	151,675			271.5	287		1	1,050	300	17
Williamsport No. 6, .....														
<b>Joseph H. Relly &amp; Co.</b>														
Brock, .....	Jefferson.	102,294	1,142	501	103,847			228.2	205			800	400	3
<b>Kelly &amp; Nugent.</b>														
Cato, .....	Centre.	11,948		100	12,048			201	21			129	50	3

Rochester and Pittsburg C. & I. Co.	Clearfield, .....	187,617	14,779	1,986	204,376	40	239	257	2	1,601	6,006	29
Helvetia No. 2, .....												
Hall & Kaul, .....	Elk, .....	12,006	50	7,186	19,242		286.8	39				4
Hazel Dell, .....												
Harbison Walker Co., .....	Clearfield, .....	12,844			12,844			22	1			2
Fairmount, .....												
Matt. Schadeck, .....	Clearfield, .....	9,126	75	50	9,251		111	30		60	300	2
Mosquito Creek, .....												
Long Valley Coal Co., .....	Bradford, .....	21,559	233	547	22,359		167	57		910		9
Long Valley No. 2, .....												
W. F. Holt, .....	Centre, .....	19,000		240	19,240		269	30				4
Cherry Run, .....												
J. F. Keating, .....												
Lyman, .....	McKean, .....	4,500		144	4,644		255	18		15	1,204	2
Instant, .....	McKean, .....	11,049	120	60	11,229		167	32		50	500	2
Total, .....		15,549	120	204	15,873		204	50		65	1,700	4
A. G. Spears, .....												
Meyer Run, .....	Clearfield, .....	13,285	20		13,305		200	43		200		5
Kersey Coal and Coke Co., .....												
Byrne No. 1, 2 and 3, .....	Elk, .....	154,104			154,104		50	265	337	2		24
Elk Coal Co., .....												
Elk No. 31, .....	Elk, .....	27,679			27,679		240	85		1	522	4,150
Cardiff Coal and Coke Co., .....												10
Cardiff No. 41, .....	Elk, .....	15,615			15,615		259	79		288	3,900	12
Isaac Stage, .....												
Clearfield No. 10, .....	Clearfield, .....			10,186	10,186		278	22				2
Kelly Bros., .....												
Snow Shoe No. 4 and 5, .....	Centre, .....	50,000	20	475	50,495		215	105		199	310	6
Esate of W. J. Jackson, .....												
Gramplan No. 1, .....	Clearfield, .....	21,558	845	95	22,498		236	45		150	50	5
Karhaus Coal Mining Co., .....												
Drittane, .....	Clearfield, .....	9,000		100	9,100		160	32				3
Clearfield and Gramplan Coal Co., .....												
Rayheld No. 2, .....	Clearfield, .....	24,000			24,000		194	47		1		3
Grand total, .....		5,582,744	68,504	61,246	5,802,779	44,376	500	221.25	13	44	42,889	40,150
								9,581				670

TABLE II—Continued.

Name of Operators.	County.	Number of Boilers.				Locomotives.			Total horse power.	Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Horizontal.		Tubular.	Horse power.	Steam.	Air.	Electric.								
		(Cylindrical.	Horse power.													
Jefferson and Clearfield Coal and Iron Co.,	Clearfield & Jeff.	4	50	21	2,400	2,400			2,400	5	800	4	16,500			6
North West Mining and Exchange Co.,	Elk & Jefferson,			8	800	850				11	765				2	
Clearfield Bituminous Coal Corporation,	Clearfield,			3	180	180				2	145					
Shawmut Mining Co.,	Elk,			8	1,000	1,000				9	1,591	17	3,500	1,850	5	1
Bussburg Coal Co.,	Tioga,			5	600	600				4	600				8	
Lehigh Valley Coal Co.,	Centre,			2	120	120				2	60					
Berwind-White Coal Mining Co.,	Clearfield,			9	1,200	1,200					345	1	825	3,000		2
Lawrenceville Coal Co.,	Jefferson,			1	20						100	5	600	500		1
Mussey & Ellsworth,	Tioga,			6							625					
Morris Run Coal Mining Co.,	Clinton,			4	450	450				9	570					
Kettle Creek Coal Mining Co.,	Clinton,			1	30	30				6	30					
Red Run Coal Co.,	Lycoming,			2	120	120				3	325					
Frank Williams & Co.,	Clearfield,			5	500	500				2	545					
Joseph H. Reilly & Co.,	Jefferson,			2	120	120				1	75					
Kelly & Nugent,	Centre,															
Rochester and Pittsburg C. & I. Co.,	Clearfield,			10	1,020	1,020				4	250	3	3,200	2,200		2
Hall & Kaul,	Elk,															
Harbison-Walker Co.,	Clearfield,															
Matt. Schadeck,	Clearfield,															
Long Valley Coal Co.,	Bradford,			1	40	40				2	31					
Wong Valley Coal Co.,	Centre,															
J. F. Keating,	Clearfield,															
A. G. Spears,	Clearfield,															
Kersey Coal and Coke Co.,	Clearfield,															
Elk Coal Co.,	Elk,			1	50	200				7	175	2	300	100		
Cardiff Coal and Coke Co.,	Elk,									1	15					
Isaac Stage,	Clearfield,									1	20					
Kelly Bros.,	Centre,															
Estate of W. J. Jackson,	Clearfield,															
Karthauss Coal Mining Co.,	Clearfield,															
Clearfield and Gramplan Coal Co.,	Clearfield,															
Grand total,		12	200	84	8,170	8,850	17	1	20	86	7,139	25	32,533	11,150	14	12





TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.								
		Inside foremen or mine bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Lineheers and firemen.	State makers.	Engoyed in the manufacture of coke.	Superintendents, book-keepers and clerks.	All other employes.	Total outside.	Grand total, inside and outside.
Clearfield Bituminous Corporation.	Clearfield.	1	220	14	13	4	2	254	1	3	2	2	1	1	15	22	276
		1	184	9	12	4	2	212	1	2	1	1	1	1	11	15	227
		1	190	8	12	4	1	216	1	1	1	1	1	1	10	13	229
		1	153	6	9	6	1	176	1	1	1	1	1	1	10	13	189
	Clearfield.	4	747	37	46	18	6	858	4	7	2	1	1	4	46	63	921
		1	45	3	3	2	2	51	1	1	1	1	1	1	8	11	62
		1	91	3	7	1	5	108	1	1	3	3	1	1	13	20	128
	Elk.	1	173	8	1	1	11	195	1	6	5	2	1	1	20	34	229
		1	109	12	1	1	3	126	1	1	2	1	1	1	8	12	138
		Total and average.		5	500	14	23	6	20	586	5	12	12	6	4	62	96
Lehigh Valley Coal Co.	Centre.	2	371	21	7	7	7	408	2	3	3	3	3	3	16	27	435
Sugar Camp No. 2.																	

Sugar Camp No. 3, .....	Centre, .....	1	78	3	1	3	86	1	2	2	.....	13	18	104
Total and average, .....	.....	3	449	24	8	10	494	3	5	5	.....	3	29	45
Berwind-White Coal Mining Co.	.....										.....			
Berwind shaft, .....	Clearfield, .....	1	4	16	10	3	269	1	4	8	4	3	8	288
Catawba, .....	Clearfield, .....	1	33	3	2	1	40	.....	1	.....	1	.....	1	43
Total and average, .....	.....	2	4	248	16	14	309	1	5	8	5	3	9	331
Morris Run Coal Mining Co.	.....										.....			
Jones No. 1, .....	Tioga, .....	1	479	62	28	34	600	1	7	4	20	7	6	645
New Mine No. 2, .....	Tioga, .....	1	74	10	6	4	95	.....	2	.....	4	4	10	105
Total and average, .....	.....	2	553	72	34	34	695	1	9	4	24	7	10	750
Kettle Creek Coal Mining Company.	.....										.....			
Kettle Creek Nos. 1, 2 and 3, .....	Clinton, .....	1	225	20	8	15	262	1	3	1	6	3	68	331
Jefferson Coal Co.	.....										.....			
Coal Glen No. 1, .....	Jefferson, .....	1	235	16	.....	4	268	1	4	5	.....	2	13	25
Coal Glen No. 2, .....	Jefferson, .....	1	34	1	2	.....	38	.....	1	.....	.....	3	4	42
Beechtree No. 2, .....	.....	2	269	17	14	.....	306	1	5	5	.....	2	16	29
Total and average, .....	.....										.....			
Magee & Ellsworth.	.....										.....			
Antrim No. 1, .....	Tioga, .....	1	69	10	8	.....	90	1	2	4	18	1	4	130
Antrim No. 5, .....	Tioga, .....	1	129	12	13	3	155	1	4	2	33	1	13	217
Anna "S" mine, .....	Tioga, .....	1	35	4	1	.....	41	.....	1	1	3	.....	3	49
Total and average, .....	.....	2	223	26	22	5	296	2	7	7	53	2	19	386
Blossburg Coal Co.	.....										.....			
Arnot No. 1, .....	Tioga, .....	1	104	7	4	8	124	.....	1	2	3	3	9	133
Arnot No. 2, .....	Tioga, .....	1	134	11	6	11	163	1	2	2	3	1	6	178
Arnot No. 3, .....	Tioga, .....	1	116	10	3	8	138	1	1	1	1	1	5	149
Arnot No. 4, .....	Tioga, .....	2	178	14	9	12	215	1	3	1	1	2	8	232
Arnot No. 7, .....	Tioga, .....	1	64	3	3	8	79	1	2	1	1	1	9	88
Bear Run, .....	Tioga, .....	2	223	.....	3	14	242	1	4	6	1	2	34	276
Maple Hill, .....	Tioga, .....	1	14	2	1	.....	19	.....	.....	.....	.....	2	3	51
Total and average, .....	.....	9	883	47	29	62	980	5	13	15	10	7	47	1,077
Red Run Coal Co.	.....										.....			
Red Run No. 2, .....	.....										.....			
Red Run No. 7, .....	Lycoming, .....	2	145	11	2	15	175	.....	5	1	8	3	33	225
Red Run No. 8, .....	.....										.....			
Frank Williams & Co.	.....										.....			
Williamsport No. 2, .....	.....										.....			
Williamsport No. 6, .....	Clearfield, .....	2	220	14	5	6	247	1	2	5	.....	2	30	287

TABLE III.—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total Inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of Coke.	Superintendents, bookkeepers and clerks.		All other employes.	Total outside.
Joseph H. Reilly & Co.																		
Breck, .....	J. H. Johnson, .....	1	.....	185	.....	6	1	2	195	.....	3	2	.....	.....	1	8	14	249
R. & P. Coal and Iron Co.																		
Helvetia No. 2, .....	C. Garfield, .....	1	1	262	.....	19	6	13	242	.....	6	7	.....	.....	2	10	25	267
Hazel Dell, .....	Elk, .....	1	.....	24	2	4	4	.....	35	.....	1	.....	.....	.....	1	2	4	39
Harrison Walker Co.																		
Fairmount No. 1, .....	Clearfield, .....	1	.....	18	.....	1	.....	1	21	.....	.....	.....	.....	.....	.....	1	1	22
Matt. Schadeck.																		
Mosquito Creek, .....	Clearfield, .....	1	.....	20	.....	2	1	2	26	1	.....	.....	1	.....	.....	2	4	30
Long Valley Coal Co.																		
Long Valley No. 2, .....	Bradford, .....	1	.....	32	.....	3	1	2	39	.....	2	3	5	.....	2	6	18	57
W. F. Holt.																		
Cherry Run, .....	Centre, .....	1	.....	25	.....	2	.....	.....	28	.....	.....	.....	.....	.....	1	1	2	30

Lyman, .....	J. F. Keating.	McKean, .....	1	12	.....	.....	.....	.....	14	1	.....	.....	.....	.....	1	2	4	18
Instant, .....	.....	McKean, .....	1	33	.....	.....	.....	.....	27	.....	1	2	.....	.....	1	1	5	32
Total and average, .....	.....	.....	2	35	.....	3	.....	.....	41	1	1	2	.....	.....	2	3	9	69
Meyer Run, .....	A. G. Spears.	Clearfield, .....	1	35	.....	2	1	2	41	.....	.....	.....	1	.....	.....	1	2	43
Kersey Coal and Coke Co.	.....	.....	1	22	.....	20	3	8	261	1	4	4	.....	.....	2	65	76	337
Byrne Nos. 1, 2 and 3, .....	.....	Elk, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elk Coal Co.	.....	.....	1	54	.....	5	1	5	66	.....	1	.....	.....	.....	1	17	19	85
Elk No. 31, .....	.....	Elk, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cardiff Coal and Coke Co.	.....	Elk, .....	1	43	.....	5	.....	3	52	1	1	1	.....	.....	1	23	27	79
Cardiff No. 31, .....	.....	.....	1	15	.....	2	.....	.....	18	.....	.....	.....	.....	.....	.....	3	3	21
Kelly & Nugent, .....	.....	Centre, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Isaac Stage, .....	.....	.....	1	13	.....	2	.....	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clearfield No. 19, .....	.....	Clearfield, .....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kelley Bros.	.....	.....	2	62	12	5	10	4	95	1	1	.....	.....	.....	2	6	10	165
Snow Shoe Nos. 4 and 5, .....	.....	Centre, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Estate of W. J. Jackson.	.....	.....	1	35	.....	2	1	.....	39	1	1	.....	.....	.....	4	.....	6	46
Gramplan No. 1, .....	.....	Clearfield, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Karthauss Coal Mining Co.	.....	.....	1	27	.....	2	.....	1	31	.....	.....	.....	.....	.....	1	.....	1	32
Brittanic, .....	.....	Clearfield, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clearfield and Gramplan Coal Co.	.....	.....	1	40	.....	2	.....	.....	43	.....	1	.....	.....	.....	3	.....	4	47
Raybold No. 2, .....	.....	Clearfield, .....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total and Average, .....	.....	.....	66	5	7,221	135	511	169	8,459	28	127	105	121	.....	79	662	1,122	9,581





TABLE IV—List of fatal accidents that occurred in and about the mines of the Fourth Bituminous District for the year ending December 31, 1901.

Date of Accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Feb.	Joseph Congellus.	Italian.	Miner.	28	S.	1	1	Red Run.	Lycoming.	Fatally injured by a blast.
March	Nicola Diodadia.	Italian.	Miner.	28	M.	1	1	West Clarion.	Jefferson.	Fatally injured by side fall of slate.
April	Aaron L. Nelson.	Swede.	Miner.	22	M.	1	1	Kettle Creek.	Clinton.	Instantly killed by fall of coal.
	John J. Hughes.	Welsh.	Miner.	59	M.	1	5	Jones No. 1.	Tioga.	Fatally injured by fall of slate.
May	Peter Gauzman.	Italian.	Miner.	31	M.	1	1	Pyrie.	Elk.	Instantly killed by fall of coal.
June	Codecarier Angelo.	Italian.	Miner.	20	S.	1	1	Pyrie.	Elk.	Instantly killed by fall of slate.
	Thomas Taylor.	American.	Miner.	40	W.	5	5	Antrim No. 5.	Tioga.	Instantly killed by mine cars.
July	Frederick Nelson.	Swede.	Miner.	26	M.	1	1	Shawmut No. 8.	Elk.	Fatally injured by fall of slate.
	James Taylor.	Slav.	Miner.	22	M.	1	1	Kettle Creek.	Elk.	Fatally injured by fall of coal.
Oct.	James S. Taylor.	American.	Miner.	41	M.	1	1	Pyrie.	Elk.	Fatally injured by fall of slate.
Dec.	Stacho Karchinski.	Polish.	Miner.	27	M.	1	5	Sugar Camp No. 9.	Centre.	Instantly killed by fall of coal.
	Patrick Wasnaick.	Pole.	Miner.	22	M.	1	5	Antrim No. 5.	Tioga.	Instantly injured by fall of roof slate.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Fourth Bituminous District for the year ending December 31, 1901.

Date of Accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan.	James Brand, .....	English.	Miner.	25	S.	Berwind shaft, .....	Clearfield.	Severely bruised by fall of roof slate.
2	Samuel Kellinsch, .....	English.	Miner.	27	M.	Berwind shaft, .....	Clearfield.	Injured internally by fall of slate.
9	Joseph Carson, .....	Swede.	Miner.	28	S.	Berwind shaft, .....	Clearfield.	Severely injured by fall of slate.
22	John Childs, .....	English.	Driver.	22	S.	New mine, .....	Tioga.	Leg fractured; caught between car and pillar.
Feb.								
26	Louis Delawitch, .....	Pole.	Miner.	22	S.	Berwind shaft, .....	Clearfield.	Back and side injured by fall of slate.
27	John Delawitch, .....	Swede.	Miner.	28	M.	Berwind shaft, .....	Clearfield.	Leg fractured by fall of slate.
28	William Baerle, .....	Swede.	Miner.	29	M.	Berwind shaft, .....	Clearfield.	Back and head injured by fall of slate.
March	W. B. Coakley, .....	American.	Laborer.	25	M.	Berwind shaft, .....	Clearfield.	Back injured by fall of slate.
26	J. E. Coakley, .....	English.	Miner.	45	M.	Fairmount No. 1, .....	Clearfield.	Leg fractured by fall of slate.
26	Charles Sholsky, .....	Slav.	Serjeant.	21	S.	Helvetia, .....	Clinton.	Cut on scalp and face by fall of slate.
April	Martin Vaxtes, .....	Slav.	Driver.	24	S.	Kettle Creek, .....	Clearfield.	Leg fractured by mine cars.
21	Samuel Kellinsch, .....	English.	Driver.	27	M.	Berwind shaft, .....	Clearfield.	Leg sprained and ankle dislocated by cars.
5	John Berzson, .....	Norwegian.	Miner.	26	S.	Antrim No. 5, .....	Tioga.	Leg fractured; run over by cars.
6	John E. Ryan, .....	Irish.	Miner.	26	M.	Antrim No. 2, .....	Tioga.	Leg fractured by fall of mine cars.
10	Harry Mills, .....	American.	Miner.	29	S.	Rayhold No. 2, .....	Clearfield.	Head injured by fall of coal.
13	Claver Tagher, .....	American.	Miner.	17	S.	Antrim No. 5, .....	Tioga.	Leg fractured; run over by cars.
14	Alexander Thompson, .....	Austrian.	Miner.	41	M.	West Harton, .....	Jefferson.	Body and legs injured by fall of coal.
15	John Vata, .....	Slav.	Rope rider.	19	S.	Helvetia, .....	Clearfield.	Collar bone fractured while attempting to jump off cars.
17	Leonard Garthwait, .....	English.	Miner.	52	M.	Rochester, .....	Clearfield.	Leg crushed by fall of coal; necessitating amputation.
25	Frank Bartkowski, .....	Pole.	Miner.	27	M.	Jones No. 1, .....	Tioga.	Leg fractured; caught between cars.
26	Henry Wellack, .....	Pole.	Miner.	24	S.	Jones No. 1, .....	Tioga.	Severely injured by fall of coal.
27	Andrew Jahngke, .....	Pole.	Miner.	34	M.	Jones No. 1, .....	Tioga.	Leg fractured by fall of slate.
27	Mark Tartin, .....	Slav.	Miner.	25	S.	Moravian, .....	Clearfield.	Leg fractured; caught between cars.
28	Adam Gallick, .....	Slav.	Miner.	37	M.	Sugar Camp No. 10, .....	Centre.	Leg fractured caught between cars and pillar.
28	Richard Fulton, .....	American.	Driver.	20	M.	Berwind shaft, .....	Clearfield.	Injured internally; caught between cars and prop.
31	L. J. Josephson, .....	Swede.	Miner.	41	M.	Grass Flat, .....	Clearfield.	Head injured by fall of slate.
31	James Duncan, .....	Scottish.	Miner.	41	S.	Jones No. 1, .....	Tioga.	Leg fractured by cars.
11	Clas Hassel, .....	American.	Miner.	31	M.	Pinecast, .....	Jefferson.	Severely burned by explosion of powder.

Oct.	11	Arnold Anderson, .....	American, .....	Miner, .....	16	g. u. n.	Pancoast, .....	Jefferson, .....	Severely burned by explosion of powder.
	17	Andrew Homborski, .....	Slav, .....	Miner, .....	20		Kettle Creek, .....	Clinton, .....	Back and legs injured by fall of slate.
	18	Robinson Sherwood, .....	English, .....	Driver, .....	23		Berwind shaft, .....	Clearfield, .....	Injured internally; crushed between car and roof.
	3	Lars Erickson, .....	Swede, .....	Miner, .....	41	M.	Antrim No. 5, .....	Tioga, .....	Arm fractured; struck by car which jumped the track.
	12	A. E. Liddle, .....	American, .....	Machine runner, .....	22	S.	Berwind shaft, .....	Clearfield, .....	Arm fractured; crushed between machine and prop.
	22	Frank Mcholtz, .....	American, .....	Driver, .....	17	S.	Williamsport, .....	Clearfield, .....	Leg severely bruised by cars.
	21	William Thompson, .....	English, .....	Miner, .....	28	M.	Coal Glen, .....	Jefferson, .....	Leg fractured by fall of slate.
	2	Scott Osborn, .....	American, .....	Miner, .....	19	S.	Sugar Camp No. 5, .....	Centre, .....	Skull fractured by blast.
	8	Joseph Jurano, .....	Austrian, .....	Miner, .....	34	M.	Sugar Camp No. 5, .....	Centre, .....	Leg fractured by cars.
	12	John Conrad, .....	Slav, .....	Miner, .....	13	S.	Pancoast, .....	Jefferson, .....	Back injured by fall of coal.
	13	Bernard Morrison, .....	Irish, .....	Machine runner, .....	21	S.	Pancoast, .....	Jefferson, .....	Some injured by fall of coal.
	13	August Yecowatz, .....	Pole, .....	Scrapman, .....	24	M.	Jones No. 1, .....	Tioga, .....	Back severely bruised by fall of coal.
	21	Theodore Knewalski, .....	Pole, .....	Gripman, .....	25	M.	Coal Glen, .....	Jefferson, .....	Leg fractured; run over by cars.
	26	William Cherry, .....	Scotch, .....	Miner, .....	61	M.	Coal Glen, .....	Jefferson, .....	Leg crushed by fall of slate; necessitated amputation.
	11	Robt. Brown, .....	Irish, .....	Miner, .....	65	M.	Catawact, .....	Clearfield, .....	Shoulder dislocated by fall of coal.
Dec.	21	Wolfgang Bauer, .....	German, .....	Driver, .....	23	S.	Elk No. 31, .....	Elk, .....	Leg fractured by cars.



# Fifth Bituminous District.

FAYETTE COUNTY.

Uniontown, March 17, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Dear Sir: I have the honor to submit, herewith, my first annual report as Inspector of Mines for the Fifth Bituminous District for year ending December 31, 1901.

I take pleasure in stating that with but few exceptions I have received very courteous treatment, and the co-operation of both operators and mine officials, in the discharge of my duties during the year, for which I desire to publicly extend my thanks.

I have made an effort to visit and inspect, as often as my time would permit, all the mines in my district.

When I have had occasion to call attention to defects in ventilation or other irregularities about the mines which required attention, I am pleased to state that there has been a disposition on the part of the officials to remedy them within a reasonable time, so that in no case have I been compelled to invoke the law, although I have been compelled to in three cases, due to misdemeanors committed through carelessness.

There are a number of new mines in a new field of this district known as the Klondyke, which are being very rapidly developed into large ones, which in my opinion have equipment, both inside and outside, equal to the best in either the new or old world.

The sanitary conditions in all the mines in the district, with but few exceptions are good.

The report contains the usual statistical tables; I very much regret that the total number of fatal accidents during the year in and about the mines was forty-one, and there were forty five serious, non-fatal accidents, making a total of eighty-six accidents, leaving twenty-three wives widows and fifty-three children orphans to mourn the loss of husband and father.

In another part of this report will be found a brief description of these accidents from personal investigation.

The quantity of coal produced per life lost was 175,707 tons. The total quantity of coal produced in this district for the year 1901, was 7,204,023 tons, which was a decrease of 2,756,250 tons from that of



1900, which was due to adding two new districts, necessitating the old ones being redistricted, thereby cutting off several very large producing mines and a number of smaller ones.

The average number of days worked was 238; the number of kegs of powder used was 17,531; the number of pounds of dynamite 429,853.

The report also contains a report of the examination, with the names of the members of the board, giving the names of the successful applicants for the positions of mine foreman and fire boss; all of which is respectfully submitted.

ISAAC G. ROBY,  
Inspector of Fifth Bituminous District.

### Summary of Statistics 1901.

Number of mines in the district, .....	66
Number of mines in operation 1901, .....	65
Number of tons of coal produced, .....	7,204,023
Number of tons shipped, .....	2,118,054
Number of tons used for steam at mines, .....	166,038
Number of tons sold to employes and others, .....	60,346
Number of tons mined by pick, .....	5,600,553
Number of tons mined by machine, .....	1,603,470
Number of tons used in the production of coke, .....	4,859,585
Number of coke ovens, .....	8,593
Number of tons of coke produced, .....	3,300,546
Number of persons employed inside the mines, ....	6,819
Number of persons employed outside the mines, ....	4,183
Number of fatal accidents, .....	41
Number of tone produced per fatal accident, .....	175,707.8
Number of non-fatal accidents, .....	45
Number of tons produced per non-fatal accident. ....	160,089.4
Number of wives made widows by accidents, .....	23
Number of children orphaned by accidents, .....	53
Number of kegs of powder used, .....	17,531
Number of pounds of dynamite used, .....	429,853
Number of cylindrical boilers in use, .....	48
Number of tubular boilers in use, .....	176
Number of steam locomotives in use, .....	21
Number of electric locomotives in use, .....	3
Number of old mines abandoned, .....	2

TABLE A—Classification of Accidents.

	Fatal.	Non-fatal.	Total.
By fall of slate .....	12	16	28
By fall of coal, .....	2	3	5
By being caught between car and rib, .....	4	2	6
By falls of coal and slate, .....	2	5	7
By an explosion of fire-damp, .....	7	1	8
By falling down shaft, .....	1	.....	1
By descending cage, .....	.....	5	5
By being caught between car and post, .....	1	.....	1
By premature blast, .....	2	3	5
By mine fan, .....	.....	1	1
By part of tippie falling down, .....	.....	1	1
By falling from ladder, .....	.....	1	1
By timber on mine car, .....	.....	1	1
By being kicked by a mule, .....	1	1	2
By mine car and door, .....	.....	1	1
By mine cars, .....	4	3	7
By removing post, .....	.....	2	2
By dilly trip knocking out timber, .....	2	.....	2
Total, .....	41	45	86

TABLE B—Occupations of Persons Killed or Injured.

	Fatal.	Non-fatal.	Total.
Miners, .....	22	28	50
Drivers, .....	10	8	18
Mining engineers, .....	3	1	4
Readman, .....	1	1	2
Dumper, .....	.....	1	1
Fire boss, .....	.....	1	1
Cager, .....	.....	1	1
Coal loader, .....	.....	2	2
Hitcher, .....	.....	1	1
Boss driver, .....	1	.....	1
Rope rider, .....	1	.....	1
Machinist, .....	.....	1	1
Machine runner, .....	.....	1	1
Laborer, .....	.....	.....	1
Assistant mine foreman, .....	1	.....	1
Total, .....	41	45	86

TABLE C—Nationalities of Persons Killed and Injured.

	Fatal.	Non-fatal.	Total.
American, .....	17	19	36
Slav, .....	14	9	23
Austrian, .....	4	4	8
Italian, .....	2	3	5
Irish, .....	2	1	3
English, .....	2	4	6
Pole, .....	.....	1	1
Hungarian, .....	.....	1	1
Fins, .....	.....	.....	1
Total, .....	41	45	86

TABLE E—Names of Operators, Showing the Number of Tons Produced, With the Fatal and Non-Fatal Accidents.

	Number of persons employed.	Number of tons of coal produced.	Number of fatal accidents.	Number of tons produced per life lost.	Total number of accidents.	Number of tons produced per accident.
H. C. Frick Coke Co., .....	2,719	2,108,813	11	191,710	21	100,419.7
M. R. C. C. & Coke Co., .....	1,486	1,470,600	6	245,100	11	133,690.2
Continental Coke Co., .....	753	405,508	1	405,508	4	101,377
South West Connellsville Coke Co., .....	1,138	672,372	1	672,372	5	134,474.4
American Coke Co., .....	842	242,383	1	242,383	14	17,315.4
Oliver & Snider Steel Co., .....	776	698,670	2	349,335	5	139,734
W. J. Kamey, .....	839	268,320	2	89,440	5	53,664
Pittsburg Coal Co., .....	275	178,988	5	35,797.6	7	25,569.7
People's Coal Co., .....	290	105,340	.....	.....	.....	.....
Lake Erie Gas and Coke Co., .....	115	86,750	.....	.....	2	43,375
Hero Coal and Coke Co., .....	59	39,800	.....	.....	.....	.....
Lafayette Coal and Coke Co., .....	107	17,665	.....	.....	.....	.....
A. L. Keister & Co., .....	153	85,809	2	42,904.5	3	28,603
Colonial Coke Co., .....	95	86,647	2	43,323.5	2	43,323.5
Bute Run Coal and Coke Co., .....	24	13,000	.....	.....	.....	.....
Isaac Taylor & Co., .....	74	72,092	.....	.....	.....	.....
E. A. Humphries & Co., .....	64	41,400	.....	.....	.....	.....
Perey Mining Co., .....	55	26,719	.....	.....	2	48,551
Stewart Iron Co., Ltd., .....	158	97,102	.....	.....	2	40,908
John Snider, .....	100	81,816	.....	.....	.....	.....
Payette Coke Co., .....	130	67,275	.....	.....	.....	.....
Puritan Coke Co., .....	42	7,583	.....	.....	.....	.....
Riverview Coal and Coke Co., .....	48	36,000	.....	.....	.....	.....
Bessemer Coke Co., .....	371	112,158	.....	.....	1	112,158
Acme Coke Co., .....	58	27,080	1	27,080	1	27,080
Uniontown Coke Co., .....	26	15,120	.....	.....	.....	.....
Penn Gas Coal and Coke Co., .....	9	7,596	.....	.....	.....	.....
Joseph Wharton, .....	80	64,151	.....	.....	.....	.....
S. H. Sackett Coke Co., .....	37	11,800	.....	.....	.....	.....
Connellsville Coke Co., .....	99	13,674	.....	.....	1	13,674
Ada Coal and Coke Co., .....	24	7,697	.....	.....	.....	.....
Cheat Haven Coal Co., .....	57	27,202	.....	.....	.....	.....

TABLE F.—Giving names of mines, kind of opening, method of ventilation, system of haulage, pick or machine, names and number of machines in use at each mine, power used in operating machines, name of seam, thickness of seam in inches.

Name of mine.	Kind of opening.	Method of ventilation.	System of haulage.	Pick or machine.	Number in Use.				Motive power.	Name of seam.	Thickness of seam in inches.
					Sullivan.	Jeffries.	Ingersoll.	Harrison.			
Leisenring No. 2 mine.	Shaft.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Youngstown mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Lemont No. 1 mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Lemont No. 2 mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Lemont No. 3 mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Leith mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Greenfield No. 1 mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Greenfield No. 2 mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Greenfield mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Wynn mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Continental No. 1 mine.	Shaft.	Fan.	Animals.	Pick and machine.			3	1	Com. air.	Pittsburg.	22
Continental No. 2 mine.	Shaft.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Continental No. 3 mine.	Drift.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Continental No. 4 mine.	Drift.	Fan.	Animals.	Pick and machine.		3			Electricity.	Pittsburg.	22
Leekrone No. 1 mine.	Drift.	Fan.	Animals.	Pick.		6			Com. air.	Pittsburg.	22
Leekrone No. 2 mine.	Drift.	Fan.	Animal and rope.	Pick.	3			1		Pittsburg.	22
Edenborn mine.	Shaft.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Mt. Braddock mine.	Drift.	Natural.	Animal.	Pick.						Pittsburg.	22
Florence mine.	Drift.	Natural.	Animal.	Pick.						Pittsburg.	22
Mt. Jackson mine.	Drift.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Hove mine.	Drift.	Furnace.	Animal.	Pick.						Pittsburg.	22
Colonial mine.	Slope.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Glenora mine.	Drift.	Fan.	Animal and rope.	Pick.						Pittsburg.	22
Grindstone mine.	Shaft.	Fan.	Animal and rope.	Pick and machine.		4			Electricity.	Pittsburg.	22
Summer mine.	Shaft.	Fan.	Animal.	Pick and machine.					Electricity.	Pittsburg.	22
Hanna mine.	Drift.	Furnace.	Animal.	Pick.					Electricity.	Pittsburg.	22
Washington mine.	Drift.	Fan.	Animal and rope.	Pick and machine.		6			Electricity.	Pittsburg.	22
Albee mine.	Drift.	Fan.	Animal and rope.	Pick and machine.		6			Electricity.	Pittsburg.	22
Little Alps mine.	Drift.	Furnace.	Animal.	Pick and machine.						Pittsburg.	22

TABLE F Ventilation, etc., etc.,—Continued.

Name of Mine.	Drift.	Method of Ventilation.	System of haulage.	Pick or machine.	Number in Use.				Motive power.	Name of seam.	Thickness of seam in inches.
					Sullivan.	Jeffries.	Ingersoll.	Harrison.			
Snow Hill mine, .....	Drift, .....	Fan, .....	Animal and rope, ..	Pick and machine, ..	.....	.....	6	.....	Electricity, ..	Pittsburg, ...	78
Adams mine, .....	Drift, .....	Fan, .....	Animal and rope, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	82
Snow Hill mine, .....	Drift, .....	Fan, .....	Animal and rope, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	82
Chammi mine, .....	Slope, .....	Natural, .....	Animal and rope, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	81
Climax mine, .....	Slope, .....	Fan, .....	Animal & electric	Pick, .....	.....	.....	.....	6	Electricity, ..	Pittsburg, ...	84
Albany mine, .....	Slope, .....	Fan, .....	Animal & electric	Pick and machine, ..	.....	.....	.....	6	Electricity, ..	Pittsburg, ...	84
Pike mine, .....	Drift, .....	Fan, .....	Animal & electric	Pick and machine, ..	.....	.....	.....	6	Electricity, ..	Pittsburg, ...	84
Crowthers mine, .....	Drift, .....	Furnace, .....	Animal & electric	Pick and machine, ..	.....	.....	.....	6	Electricity, ..	Pittsburg, ...	71
Buffington mine, .....	Shaft, .....	Fan, .....	Animals, .....	Pick and machine, ..	.....	*1	.....	.....	Com. air, ...	Pittsburg, ...	82
Lambert mine, .....	Shaft, .....	Fan, .....	Animals, .....	Pick, .....	.....	*6	.....	.....	Com. air, ...	Pittsburg, ...	75
Gates mine, .....	2 shafts, .....	2 fans, .....	Animal and rope, ..	Pick and machine, ..	.....	.....	.....	.....	.....	Pittsburg, ...	76
Griffith mine, .....	Drift, .....	Natural, .....	Animal and rope, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	88
Griffin mine, .....	Drift, .....	Furnace, .....	Animals, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	86
Footdale mine, .....	2 drifts & .....	Fan, .....	Animals, .....	Pick and machine, ..	.....	*2	.....	1	Electricity, ..	Pittsburg, ...	83
Parshall mine, .....	Drift, .....	Natural, .....	Animals, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	86
Shamrock mine, .....	Slope, .....	Fan, .....	Animal and rope, ..	Pick and machine, ..	.....	.....	.....	*1	Electricity, ..	Pittsburg, ...	86
Aerie mine, .....	Drift, .....	Natural, .....	Animal, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	86
Shutfield mine, .....	Drift, .....	Natural, .....	Animal, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	72
Penn mine, .....	Drift, .....	Natural, .....	Animal, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	72
Boone mine, .....	Drift, .....	Natural, .....	Animal, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	68
Sackitt mine, .....	Drift, .....	Natural, .....	Animal, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	61
Connellsville No. 1 mine, .....	Drift, .....	Fan, .....	Animal & locomotive, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	68
Ada mine, .....	Drift, .....	Furnace, .....	Animals, .....	Pick, .....	.....	.....	.....	61	.....	Pittsburg, ...	61
Radio mine, .....	Drift, .....	Furnace, .....	Animals, .....	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	68
Cash and mine, .....	Slope, .....	Fan, .....	Animal and rope, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	81
Stewart mine, .....	Slope, .....	Fan, .....	Animal and rope, ..	Pick, .....	.....	.....	.....	.....	.....	Pittsburg, ...	84



Snider min., .....	Drift, .....	Natural, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	80
Revere No. 1 mine, .....	Slope, .....	Fan, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	78
Revere No. 2 mine, .....	Drift, .....	Furnace, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	75
Oliver No. 1 mine, .....	Shaft, .....	2 fans, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	92
Oliver No. 2 mine, .....	Shaft, .....	Fan, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	92
Percy mine, .....	Slope, .....	Fan, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	90
Linsmith mine, .....	Slope, .....	Fan, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	90
Lafayette mine, .....	Drift, .....	Natural, .....	Animals, .....	Pick and machine, .....	.....	.....	.....	Pittsburg, .....	90
Chester mine, .....	Slope, .....	Fan, .....	Animal and rope, .....	Pick, .....	.....	.....	.....	Pittsburg, .....	86



Penn mine, .....	Uniontown Gas Coal Co., .....	Drift, .....	Natural, .....		6,000		1
Sackett mine, .....	Sackett Coal and Coke Co., .....	Drift, .....	Natural, .....		3,200		1
Bourne mine, .....	Joseph Wharton, .....	Drift, .....	Furnace, .....		32,600		1
Conedsville No. 1 mine, .....	Conedsville Coke Co., .....	Drift, .....	Fan, .....	Brazil, .....	30,000	60	1
Ada mine, .....	Ada Coal and Coke Co., .....	Drift, .....	Furnace, .....		15,000		1
Eagle mine, .....	Chest Haven Coal and Coke Co., .....	Drift, .....	Furnace, .....		18,000		2
Oliver No. 1 mine, .....	Oliver and Snider and Steel Co., .....	Shaft, .....	2 fans, .....	[Brazil, ..]	223,200	75	1
Oliver No. 2 mine, .....	Oliver and Snider and Steel Co., .....	Shaft, .....	Fan, .....	[Guibal, ..]	223,200	75	1
Lynch mine, .....	A. L. Keister & Co., .....	Slope, .....	Fan, .....	Guibal, ..	80,000	40	1
Lafayette mine, .....	Lafayette Coal Co., .....	Drift, .....	Natural, .....		21,600		1
Hero mine, .....	Uniontown Coal Co., .....	Drift, .....	Fan, .....	Brazil, .....	45,000	330	1
Colonial mine, .....	Colonial Coal and Coke Co., .....	Drift, .....	Furnace, .....		15,000		1
Eleanor mine, .....	Pittsburgh Coal Co., .....	Drift, .....	Fan, .....	Brazil, .....	18,700	40	1
Grindstone mine, .....	Pittsburgh Coal Co., .....	Slope, .....	Fan, .....	Brazil, .....	30,000	50	1
Summer mine, .....	Lake Erie Gas Coal and Coke Co., .....	Shaft, .....	Fan, .....	Guibal, .....	100,000	75	1
Pike mine, .....	People's Coal Co., .....	Drift, .....	Fan, .....	Robinson, ..	80,000	42	1
Albany mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Fan, .....	Capell, .....	50,000	60	1
Chickas mine, .....	M. R. C. Coal and Coke Co., .....	Slope, .....	Natural, .....		16,000		1
Chambers mine, .....	M. R. C. Coal and Coke Co., .....	Slope, .....	Fan, .....	Guibal, .....	16,000	60	1
Snow Hill mine, .....	M. R. C. Coal and Coke Co., .....	Slope, .....	Fan, .....	Brazil, .....	16,800		1
Andry mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Fan, .....	Brazil, .....	28,000	70	1
Snow Hill mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Fan, .....	Pollock, .....	45,000	60	1
Little Alps mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Furnace, .....		28,000		1
Washington mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Fan, .....	Pollock, .....	47,000	55	1
Allice mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Fan, .....	Pollock, .....	60,000	45	1
Hanna mine, .....	Pittsburgh Coal Co., .....	Drift, .....	Furnace, .....		10,000		1
Crawthorn mine, .....	M. R. C. Coal and Coke Co., .....	Drift, .....	Furnace, .....		25,000		1
Continental No. 1 mine, .....	Continental Coke Co., .....	Drift, .....	Furnace, .....		51,533 1/2	5N4X12	1
Continental No. 2 mine, .....	Continental Coke Co., .....	Shaft, .....	Fan, .....	Capell, .....	65,000	32	1
Continental No. 3 mine, .....	Continental Coke Co., .....	Slope, .....	Fan, .....	Capell, .....	119,000	55	1
Continental No. 4 mine, .....	Continental Coke Co., .....	Drift, .....	Fan, .....	Guibal, .....	57,600	38	1
Custer mine, .....	A. E. Humphries, .....	Drift, .....	Fan, .....	Guibal, .....	58,000	70	1
Fluore mine, .....	Bate Run Coal and Coke Co., .....	Slope, .....	Fan, .....	Guibal, .....	12,000	45	1
Mt. Hope mine, .....	Isaac Taylor and Co., .....	Drift, .....	Natural, .....		12,800		1
					38,400		1

\*Ventilated from No. 1.

†Just put in operation.

‡Ventilated from Anchor mine.

TABLE G—Continued.

Names of Collieries.	Names of Operators.	Number of Cubic Feet of Air Circulating in Each Split.						Number of cubic feet in circulation per person employed.
		First.	Second.	Third.	Fourth.	Fifth.	Sixth.	
Leekene No. 1 mine.	South West Connellsville Coke Co.	44,600	39,500	42,800				1,000
Leekene No. 2 mine.	South West Connellsville Coke Co.	54,000	13,600					1,125
Postdale mine.	South West Connellsville Coke Co.	9,705	12,000	18,000			9,100	678
Budington mine.	South West Connellsville Coke Co.	19,200	21,280		27,000	12,600		718
Lambert mine.	American Coke Co.	33,600	9,000					1,300
Edinburgh mine.	American Coke Co.	36,400	25,200	18,800				810
Gates mine.	American Coke Co.	28,800	42,100					1,300
Leedsburg No. 1 mine.	H. C. Friek Coke Co.	30,000	12,000	35,000	36,720	38,200		800
Youngstown mine.	H. C. Friek Coke Co.	33,000	50,400	16,800				1,170
Lemont No. 1 mine.	H. C. Friek Coke Co.	18,500	20,000	13,500				1,111
Lemont No. 2 mine.	H. C. Friek Coke Co.	14,500	14,500	13,720				1,200
Lemont No. 3 mine.	H. C. Friek Coke Co.	50,400		18,300	35,000		21,000	1,200
Lemont No. 4 mine.	H. C. Friek Coke Co.	40,000	12,000	20,000				1,200
Brayfield No. 1 mine.	H. C. Friek Coke Co.	57,500	61,600	19,800	12,500	15,000		540
Brayfield No. 2 mine.	H. C. Friek Coke Co.	27,000	28,600	38,250				524
Oilephant mine.	H. C. Friek Coke Co.	52,250	24,000					511
Wynn mine.	H. C. Friek Coke Co.	16,800	21,500					620
Kyle mine.	Stewart Iron Co., Ltd.	15,200	16,800	17,400				1,060
Stewart mine.	Atlas Coke Co.	24,000	9,000	8,600				1,600
Crossland mine.	Percy Mining Co.	28,000	15,300	23,110				1,600
Mt. Bradlock mine.	W. J. Rainey.	15,300	7,620					1,900
Revere No. 1 mine.	W. J. Rainey.	32,400	9,000	10,000				361
Revere No. 2 mine.	W. J. Rainey.	13,200	10,400					242
Smelter mine.	John S. Rainey.	12,000	11,620					380
Shelby mine.	Payette Coke Co.	10,000						485
Puritan mine.	Puritan Coke Co.	14,000	21,400					600
Griffin mine.	Puritan Coke Co.	14,200						230
Riverside mine.	Riverside Coal and Coke Co.	12,800	12,200					432
Acme mine.	Acme Coke Co.	11,200						268
Smithfield mine.	Uniontown Coke Co.	15,600						481
Penn mine.	Uniontown Gas Coal Co.	10,500						527
Sackett mine.	Sackett Coal and Coke Co.	6,000						248
Bourne mine.	Joseph Wharton.	3,200						165
		15,000	14,000					302

Connellsville No. 1 mine,	Connellsville Coke Co.,	28,600			235
Ada mine,	Ada Coal and Coke Co.,	12,000			1,115
Beagle mine,	Cheat Haven Coal and Coke Co.,	22,100	6,500		470
Oliver No. 1 mine,	Oliver and Snider and Steel Co.,	22,100	26,220	38,100	576
Oliver No. 2 mine,	Oliver and Snider and Steel Co.,	67,000	10,800		576
Lineda mine,	A. L. Koester & Co.,	14,000	10,000	24,700	1,040
Lafayette mine,	Lafayette Coal Co.,	16,840	4,000		485
Smock mine,	Uniontown Coal Co.,	28,000	11,000		1,030
Hero mine,	Uniontown Coal Co.,	14,800			600
Continental mine,	Pittsburg Coal Co.,	14,200	4,500		1,600
Wheat mine,	Pittsburg Coal Co.,	27,300	14,700		2,100
Summer mine,	Pittsburg Coal Co.,	20,000	32,000	24,000	1,760
Snake mine,	Lake Erie Gas Coal and Coke Co.,	32,000	6,400	25,200	700
Pike mine,	People's Coal Co.,	36,200	26,500		250
Albany mine,	M. R. C. Coal and Coke Co.,	13,200	18,100		390
Champion mine,	M. R. C. Coal and Coke Co.,	16,400	32,840		300
Stony Hill mine,	M. R. C. Coal and Coke Co.,	10,800			102
Another mine,	M. R. C. Coal and Coke Co.,	12,600	9,600		262
Snow Hill mine,	M. R. C. Coal and Coke Co.,	28,000	10,500	15,200	203
Little Alps mine,	M. R. C. Coal and Coke Co.,	29,120	11,750		950
Washington mine,	M. R. C. Coal and Coke Co.,	10,080	33,330	12,460	1,000
Albion mine,	M. R. C. Coal and Coke Co.,	9,600	9,800		350
Hanna mine,	Pittsburg Coal Co.,	8,400	11,200		262
Continental No. 1 mine,	Continental Coke Co.,	28,000	37,200		650
Continental No. 2 mine,	Continental Coke Co.,	31,500	30,000	33,000	780
Continental No. 3 mine,	Continental Coke Co.,	24,000	20,000		1,150
Continental No. 4 mine,	Continental Coke Co.,	7,000	28,000	10,000	773
Chesler mine,	A. E. Humphries,	7,370	10,800		430
Florence mine,	Butte-Han Coal and Coke Co.,	12,800			583
Mt. Hope mine,	Isaac Taylor and Co.,	6,000	9,000	12,000	925



## Gob or Mine Fires

About 4 o'clock Thursday, December 5, 1901, in company with B. F. Jones, division superintendent of H. C. Frick Coke Company, and C. M. Shank, superintendent, Lemont mines, Lemont Furnace, I discovered smoke on an old gob in North slope No. 3 room, No. 1 butt of No. 4 right or H flat. The presence of this smoke indicated a smouldering gob fire, which must necessarily have been of spontaneous origin. This part of the mine had not been in active operation since 1897, but on account of the gob being very much heated and the peculiar smell due to a combination of the gasses being given off by it, that there had been a suspicion for more than a year that it might be on fire. The management being cognizant of the danger that follows a mine fire, naturally felt very uneasy, therefore to guard or watch the indications closely, thermometers were hung at different points and a close watch was kept on the place by inspections being made every other day and a reading of the thermometer taken and a record made of same. One of the peculiar features was that the temperature continued to lower as indicated by the thermometer, while the odor of gas apparently increased, and while it would naturally be supposed from the lowering of the temperature, as was indicated by the thermometer, that the danger from fire was becoming more remote, as even the water that passed through the old gob was gradually approaching its normal temperature, yet even against these indications, the peculiar odor of the gasses continued gradually to increase.

The reading of the thermometer on the date of the discovery of the smoke was only 54 degrees F. The fact that the district in the immediate vicinity of where the smoke was discovered was giving off marsh gas in considerable quantities, with also a body of fire-damp standing near, caused great anxiety. Steps were immediately taken to build stoppings and seal off the entire connected section; first with temporary stoppings which formed part of the permanent stoppings, followed immediately by concrete and brick. The work on the stoppings were rapidly prosecuted until its completion, although on one of my visits, after their completion, I found that gas was slowly issuing through several of these stoppings, to such an extent that it would indicate its presence on a safety lamp, and as often such as conditions arose the masons would go over the stoppings carefully and plaster them with another coat of cement.

In order to shut off and entirely seal up the affected section, it was necessary to build three stoppings on No. 4 right flat, three on No. 5 right flat, and five on No. 6 right flat. The stoppings on No. 6 flat are on Butts Nos. 1 and 2. And it might be well to state here, that the erection of the stoppings in the lower flats necessitated some pro-

vision being made for the purpose of relieving the head or pressure of water, that would naturally come against them. This was done by building, in each of the stoppings where the conditions demanded, a water trap of wooden pipe, adjusted in such a way that it would relieve the head of water without admitting any air into the affected district, which was being watched in every detail as closely as possible.

On the evening of July 23, a fire originated in the Edenborn mines, the result of a blown out shot. It started in the first sump butt heading, now known as stable heading, which begins at station 1+30 of the first right flat. The face of the heading at this time was about 330 feet in from the flat, and the grade was dipping about two per cent. A cut-through thirty feet back from face, had been started and was in about twenty feet. A line of brattice built of boards extended a few feet past this cut-through, which was very dry. The fire boss had examined the heading at 6.30 P. M., when it was about ready for a blast, and had not detected any gas. One-half hour later the shot was fired, which ignited the coal dust, and the gas which the shot had liberated. The men who were working in the heading at the time started to find the fire boss, and it was some twenty minutes before he reached the scene of the fire.

During this time the fire had extended back fifty feet from the face and had caught the brattice. The fire boss ordered all the men out of the mines, and at 7.30 all were out.

The superintendent and pit boss were notified and arrangements were at once made to reenter the mines by No. 2 shaft. The pit boss, fire boss and two other men went down at 8 o'clock, worked around No. 1 shaft and opened the door on the lower side of Parallel butt, forcing the smoke around the empty track to back of No. 1 shaft.

Mules which had been left in No. 1 were then taken out, and preparations were made to flood the stable heading. Water was turned on at 12 o'clock. By this time the smoke and heat were so intense that no work could be done in the stable heading. The fire extended back 250 feet.

It became necessary to build three brattices, which were completed on the night of the 24th. They were constructed of plank and clay filling. Nos. 1 and 2 were completed first, allowing the smoke and gas to escape by No. 3, when that was afterwards closed tight. The heat and smoke retarded the work, but under the guidance of the pit boss the men stuck faithfully to their work and were at last successful.

Thursday the heading was flooded, and an examination made on Friday afternoon showed that the fire was extinguished and no accident occurred. The mine was opened up, ventilation established, and after the loose top was taken down and the part of the mine that the

heat from the fire had damaged had been made safe, work was resumed as usual.

### Accidents by Fire-damp Explosions.

As will be observed by glancing over the tables, there were seven fatal and one non-fatal accident in this district in 1901, by explosions of fire-damp.

Three of the number occurred from the careless use of open lights and negligence of the management in charge at the mines, as the engineers were allowed to pass into the mines for the purpose of making a survey without the mine first having been examined by the fire boss and reported safe.

Three of the fatal accidents occurred at the Grindstone mines, Pittsburg Coal Company, December 3, 1901, at 3.30 P. M., when a party of four engineers passed into the mines, for the purpose of making a survey. They were instructed by the mine foreman not to pass through the last cut-through with their open lights, and this appeared to have been a standing order at the mine, although it evolves considerable fire-damp and is worked with open lights. Two of the surveying party carried closed lights, and two open ones and in passing into the face of No. 7 butt entry, one of the party who carried the open light ignited the gas 178 feet from the face of the heading and about forty feet back of the last cut-through.

Two of the party that carried the closed lamps had passed on and were near the face of the heading when the explosion occurred.

Two of the victims died on the 9th, and one on the 13th of December.

There was no evidence of any great violence at the seat of the explosion, but there was that coal dust had added very materially to its intensity.

So long as the use of open lamps is permitted in mines that evolve fire-damp, similar occurrences may be expected.

On March 25, 1901, 9 A. M., an explosion occurred in the Gates shaft mine, due to a blown out shot near the face of the right parallel air course or where the right parallel air course crosses the main heading about 800 feet from the bottom of No. 1 shaft.

As a result of this explosion, Gibson Gilmore, George Pedesco, James Wilson and James Murphy lost their lives.

The operator had furnished and equipped the mine with everything necessary to operate it safely, but through lack of discipline and good management in the mine, by circulating the air around the face of the workings to such an extent as to dilute and render harmless the noxious gases, gas was allowed to accumulate in dangerous quantities, and as a result this very sad accident occurred. Below

will be found the verdict at which the jury arrived after a very exhaustive investigation of nearly five days.

"James Wilson, George Pedesco, James Murphy and Gibson Gilmore came to their death March 26, 1901, from burns inflicted upon their persons by an explosion of gas in the Gates mine of the American Coke Company situated in German township, Fayette county, Pa., on March 25, 1901, caused by a blown out shot fired by Mike Goble in said mine when gas was present in dangerous quantities. We also find that said Mike Goble fired the shot that caused the explosion, without authority and contrary to the mining law. We further find that standing gas was present in said mine in dangerous quantities in various working places, in violation of the mining laws, and that the reason that the gas was present was owing to the improper and deficient ventilation of said mine due to failure of the acting mine foreman and fire boss to keep the mine clear of standing gas and to keep workmen from entering when gas was present in dangerous quantities.

FRANK H. TAYLOR,  
Coroner.

Alfred H. Hood,  
David Blackburn,  
Jas. W. Stouffer,

Bernhart Walker,  
Michael Darr, Sr.  
Thomas M. Fee.

There appears to be a prevailing opinion among some mining men, that they can operate a mine that evolves fire-damp, successfully and without risk, by the use of open lamps, but it appears to me, that men who imagine themselves capable of doing what other men have failed to do, assume too much to be successful and prudent mine managers, and in my opinion, so long as the use of open lamps is permitted or tolerated in mines, that evolve marsh gas, just so long may we expect to be startled by the sad report that another explosion has occurred, and lives have been foolishly sacrificed.

The following is the coroners jury's verdict, at the inquest which was held December 13, 1901, at Brownsville over the body of Charles Zimmerman, one of the victims of the Grindstone explosion: "That the said Charles Zimmerman came to his death, December 13, 1901, from injuries received in the Grindstone mine of the Pittsburg Coal Company, Jefferson township, Fayette county, by an explosion of gas on December 3, 1901, which was caused by an open light in the cap of William C. Heath, coming in contact with standing gas in entry No. 7, 178 feet from the face of the heading, and we find Mine Foreman James N. Eaton guilty of neglect of duty in having permitted deceased to enter the mine, without it first having been properly examined by the fire boss or by himself; also for permitting standing gas in said mine.



We also find that the fire boss, David E. Jones, was guilty of neglect of duty in failing to notify deceased of their danger from gas by reason of poor ventilation in entry No. 7, or in failing to examine the place for them. Also for his failure to place danger signals at entrance to the idle workings, where the explosion occurred.

We censure the management of the Pittsburg Coal Company at the Grindstone mine for failure to employ a competent mine foreman and fire boss, and we recommend that the Mine Inspector of the Fifth Bituminous District proceed legally against the said mine foreman, James N. Eaton and fire boss, David E. Jones. And we further recommend, that the said Mine Inspector of the Fifth Bituminous District use his utmost endeavors to secure an amendment to the mining laws of the State compelling the use of safety lamps only, in all gas producing mines.

Harry Eastman,  
Lawrence B. Koole,  
Danl. H. Pearsall,

Rinard R. Bulger,  
Jennings C. Bennett,  
Jos. G. Smith,

Jurors.

#### Accidents from Miscellaneous Causes.

As has already been stated in the report, and it is very unpleasant and sad opinion to express, that the greater number of victims of mine accidents, have through their own carelessness and poor judgment contributed to their misfortune. One was killed by falling down a shaft, four were seriously injured by the engineer losing control of his engine while lowering them down the shaft. Two were killed and three injured by blast. One man was injured by being caught in mine fan. He was oiling the bearings of a Capell fan, and it being a force fan, formed a partial vacuum at the eye of the fan, and by standing too close his clothes were sucked into the fan, and the scoop of the blade catching them, drew him in and badly crushed him. Two were seriously injured by part of the tippie falling on them; one was seriously injured by falling from a ladder; another's jaw was badly fractured by being kicked by a horse while taking him outside; another was caught in machinery, etc. The number of accidents can be reduced only by the victims exercising better care for their own safety.

#### Accidents from Falls of Roof and Coal.

Sixteen fatal and twenty-four serious, non-fatal accidents occurred in this district from falls of roof and coal, being 46.5 per cent. of the whole number of accidents. This appears to be one of the most prolific causes of accidents.



The records also show that the greater number of these occur to victims who show an utter disregard of the dangers, and fail to heed the advice and warnings of those who are trying to protect them. After fully considering the stand that is taken by so many of the employes and the large percentage of inexperienced miners, it is a cause for surprise that the number of fatalities is not greater.

After a full investigation of the accidents that have occurred in this district, I find that a few of them might have been averted by a more careful inspection and the enforcement of rigid discipline on the part of the mine management. A number of accidents occur, not from the condition of the mine or the condition that exists in the mine, but rather from the utter disregard for the dangers that surround them and the conduct of the men who are the victims of the accident.

#### Accidents to Drivers, Runners and Others by Mine Cars.

The number of accidents, caused in various ways by mine cars, was thirteen fatal and eleven non-fatal or 31.7 per cent. and 24.4 per cent. of all the accidents. Drivers furnish by far the greatest number of victims in this class of mine accidents. Some were killed while riding on trips, others were crushed against the rib by mine cars, others were kicked by mules in front of moving cars, still others were caught against door frames, etc. To prevent this class of accidents, it is certainly very clear that experienced miners must be employed for this kind of work, and strict discipline will no doubt reduce the number of accidents.

#### Description of Mines.

H. C. Frick Coke Company.—There were at the end of this year, nineteen mines in the district under the management of this company; twelve are in the Connellsville basin proper, while the other seven are in the new field known as the New Klondyke field, on the eastern out-crop of the Monongahela River syncline.

Kyle.—This mine has been in very good condition as to safety and healthfulness, on all my visits. The talked of improvements in former reports have not yet been made, owing more to the new acquisitions in the New Klondyke field.

Wynn.—This mine retains about its usual standing. On my visits I have found it in a satisfactory condition.

Oliphant.—During the year this mine has been improved by arching the entrance to the manway with brick, and building an over-cast which has improved its condition as to healthfulness. There has also been a portion of the slope laid with heavy iron.

Redstone No. 2.—I found on all my visits to this mine, the conditions as to healthfulness and safety, very satisfactory, excepting that on my last visit the black damp in one part gave some trouble. The drainage was good. There are extensive improvements talked of which will place this mine in front when completed. The plans are at present in the hands of the engineer and will likely be carried out some time during the year.

Redstone No. 1.—This mine was in a satisfactory condition with regards to healthfulness and safety on all my visits, and will be as equally benefitted as No. 2 when the contemplated change is made.

Leith.—The ventilation of this mine has been much improved during the year by the installation of a new Capell fan sixteen feet in diameter and eight feet in width. On one of my visits after the new fan had been installed and the bearings were smooth, the fan passed 403,000 cubic feet of air per minute. The drainage of the mine is in good condition and is carefully looked after.

Leisenring No. 2.—This is an excellent mine, favored with good grades, good top and bottom and with high coal. On my last visit they had a new Capell fan in operation and I measured 249,000 cubic feet at the inlet. The workings of this mine being very extensive, this new and powerful fan was very badly needed. During the coming year there will be some changes of importance made in the extension of mechanical haulage inside. The mine was free from fire-damp during the entire year and its condition as to healthfulness and safety was very satisfactory.

Youngstown.—There is a new slope being driven north of the old slope at this mine for the purpose of developing some new coal. The top along this new slope and the adjacent new workings is very bad and requires very great care on the part of the management. I had occasion on one of my visits to complain of some dangers along the manway but was met with a willingness on the part of the officials to immediately take the matter up and remove the dangers. In all my visits I have found the mine in satisfactory condition.

Lemont No. 3.—This mine was not operated during the entire year. It receives its ventilation from No. 1 and employs only about thirty miners. I have on all my visits found it in a satisfactory condition.

Lemont No. 1.—This mine is well looked after and kept in a healthful condition as to ventilation, drainage and safety.

Lemont No. 2.—I found this mine to be in a safe and healthful condition on all my visits.

#### Coal Lick Run Branch.

Continental No. 1.—The sanitary condition of this mine was good on all my visits although it has at times produced fire-damp very

freely. It was comparatively free from this gas with the exception of one visit and a move was immediately made to remove the same, which was accomplished the following day. This will be an excellent mine. Money has been freely used in construction work, both inside and out.

Continental No. 2.—This mine is also located on the Coal Lick Run branch and is another of the fine and well equipped mines. In some parts of this mine there is trouble from bad tops which have at times produced large volumes of fire-damp. On each of my visits, I found it in a safe and healthful condition.

Continental Nos. 3 and 4.—The slope mine No. 3 has not yet produced any gas. The same that has been said of the above two mines in regards to construction and general equipment can be said of this mine. It has not yet produced any fire-damp but has very bad top at some points. I have found the mine in a safe and healthful condition on each of my visits to it.

Number 4 is a drift mine, and owing to the construction of the fan, the narrow airway leading from the fan to the mine and the temporary stoppings, there were some parts of it not in a healthful condition with regards to ventilation on my last visit.

Leckrone Mines Nos. 1 and 2.—These two mines are located on the Smithfield branch of the Baltimore and Ohio. Both are drift mines. No. 1 is perhaps one of the finest mines in the world, both inside and out. No. 2 is also an excellent mine, being as well constructed on the outside as No. 1, but not being naturally favored so well inside, both having sprocket chain hoist to raise coal to tipple.

Buffington Shaft.—This is another good mine, which also produces large quantities of gas, and on one of my visits I found considerable standing gas and while there, steps were taken to remove the same. The mine is kept in a healthful condition and its safety is carefully looked after.

Footdale.—At this mine there is one slope and two drifts all connected with one system of ventilation. This mine also has sprocket chain hoist to raise coal to tipple. On all my regular official inspections I have found it in a healthful and safe condition.

Lambert Shaft Mine.—Six hundred and thirty-one feet to top of coal. This is another mine in the new Klondyke field and is one of the most gaseous mines in the western part of the State. There has never at any time been any blasting allowed in the mine, and on my inspections I have found it impossible to work some places more than fifteen or twenty feet in advance of the air current when there has been from 10,000 to 15,000 cubic feet passing. This mine has been exceptionally fortunate, as there have been no accidents of any note since its completion, except on one occasion where W. H. Rosenlief, hoisting engineer, lost control of his engine while lower-



ing ten men into the mine, preparatory to their going to work. Nine of the ten were more or less seriously injured. On my investigation of this accident there were some facts brought out that showed the engineer to have been under the influence of liquor, and I have brought suit against him and he will be arraigned in March, 1902. The mine is very carefully looked after and is kept in a safe and healthful condition.

Edenborn.—This mine produces large quantities of gas, and on one of my visits it was found in considerable quantities. The mine is equipped with a twenty foot Guibal fan and on my last visit was in a healthful and satisfactory condition.

Gates.—This mine is a strong producer of marsh gas and is equipped with two twelve foot Capell fans capable of circulating under favorable circumstances 160,000 cubic feet of air at 130 revolutions each. It has bad top in some parts, but despite this I found it in a very healthful and satisfactory condition on my last visit.

Smithfield.—This mine was in a good condition on all my visits.

Penn.—This is a new mine and on none of my visits had a sufficient number of men working to bring it under the requirements of the law, although the sanitary condition is good.

Bourne.—This mine is fully up to the provisions of the law as to healthfulness, and is being very carefully looked after.

Sackett.—This mine was in a very satisfactory condition as to ventilation and drainage.

Connellsville No. 1.—This mine is in good condition and fully up to the requirements of the law.

Eagle.—The sanitary conditions of this mine was satisfactory on all my visits.

Revere Nos. 1 and 2.—On my last visit both were in a very satisfactory condition as regards ventilation and drainage.

Shamrock.—This is practically a new mine and there are 150 ovens. A new Capell fan has been installed during the year. Mine was in very satisfactory condition on all my visits.

Parshall.—This is a small mine and has thirty-two oven and tippie connections for loading coal. The sanitary condition was good on each visit.

Donald.—This mine is being rapidly developed with a view of making it a large producer. The management has installed two electric chain machines and is building coke ovens, and has also increased their acreage.

Griffin.—The sanitary condition of this mine was very satisfactory on each of my visits. A large furnace was built during the year.

Acme.—This mine was in good condition on my last visit.

Mt. Braddock.—On two of my visits the condition of the mine did not come up to the requirements of the law as regards ventilation,

there by rendering the atmosphere of the mine unhealthful. In some parts of the mine, on my last two visits, the ventilation was much improved.

Percy.—This mine was in good condition on each visit, and up to the requirements in every particular.

Stewart.—The sanitary condition of this mine is good. Natural conditions are very much against the management and operation of the mine, in the nature of a bad roof.

Crossland.—This mine is carefully looked after and is fully up to the requirements of the law.

Snider.—This mine was in good condition on my last visit.

Oliver Nos. 1 and 2.—These mines are in every particular up to the requirements of the law. A large number of permanent masonry stoppings have been built and the mine doors have been set in masonry during the year.

Colonial.—This is a new mine, which on each of my visits was in a satisfactory sanitary condition. While the ventilation and drainage are not good, they are an improvement on the old mine.

Hero.—This is a small mine and is ventilated by a furnace. The sanitary condition was satisfactory on my last visit.

Lincoln.—This mine is in good condition, and in all parts the ventilation is ample and well distributed.

Lafayette.—Is a new mine with 111 ovens. The ventilation was not good owing to the fact of their not being any means of artificial ventilation. The drainage and general conditions were satisfactory on my last visit. The mine changed hands lately and the owners contemplate installing a large fan and developing this into a fine plant.

Mt. Hope.—This mine was in good condition as to ventilation on my last visit. On one of my previous visits the current was very sluggish and did not clear the powder smoke, thus rendering the air unhealthful.

Eleanor.—Has been very much improved during the year, having been equipped with a new haulage system which allows them to haul from both openings with one rope. The mine has every indication of being well looked after.

Smock.—The much talked of Capell fan that was to have been installed at Smock has not yet materialized. Preparations were made for it about a year ago by doing some of the masonry work, but there is no more evidence of its completion now than then. I have on all my visits found it in a healthful condition.

Sumner.—During the year there has been a new tippie built about a half mile below the shaft, with a new slope driven, and connections were made to the mine sometime in December. Owing to the greater portion of the coal lying north to the shaft and immediately



in front of the new slope, they expect the operations to gradually decrease at the shaft, and increase at the new slope until nearly all the operations will be concentrated at the slope.

Crothers.—This mine was in a fair condition as to ventilation and drainage on my last visit.

Pike.—This is a new mine located in Brownsville and is equipped for a large output. A twenty foot Robinson fan, capable of producing a very large volume of air has been installed. I found the mine in a healthful condition on each of my visits.

Hannah.—In my visits to this mine I have found it in a healthful and satisfactory condition.

Grindstone.—I have on all my inspections found it in a healthful condition. Considerable improvements have been made during the year. A new rock slope has been driven in the northwest part of this property which will be completed early in the spring of 1902 for the purpose of ingress and egress also for ventilation, and for lowering supplies.

Snow Hill.—This mine was not in operation at any of my visits.

Anchor.—This mine was in a healthful condition on my last visit and the management say it will be exhausted by the middle of the coming year.

Stony Hill.—This mine is ventilated by the Anchor mine fan and on all my visits I found the quantity of air passing into the mine equal to the requirements of law, but it was so sluggish near the face of the workings that the sanitary conditions were not satisfactory. My first visit was occasioned by a petition from some of the miners to the Chief of the Bureau of Mines complaining of the unhealthful condition of the mine. Upon receiving notice from the Chief I immediately requested Mr. Henry Louttit, Inspector of the First Bituminous District to meet me in a joint inspection and found the miners justified in their complaint. Immediately after our inspection I notified the mine foreman and the superintendent to comply with the mine laws and have since had two conferences with the mine officials and provisions are rapidly being made to improve the condition of the mine. The management reports that it will be exhausted by the first of June.

Chamouni.—This mine was not in operation from May 18, until December 7, consequently I did not make an official visit and the mine was not in operation when I did visit it.

Climax.—On my last visit the drainage and ventilation were not satisfactory. This mine was exhausted in September of this year.

Albany.—This mine has been in a very satisfactory condition, except that the ventilation is sluggish in some parts.

Washington.—On all my visits to this mine I found the sanitary conditions very satisfactory.

Little Alps.—This mine was in operation only part of the year, consequently I made but one official visit and found ventilation, drainage and other general conditions satisfactory.

Alice.—This is a large mine, and while the quantity of air passing is fully up to the requirements of the law, on all my visits I found the air in some parts was so sluggish that it did not remove the deliterious gases due to powder smoke and open lights, so as to keep the mine in a healthful condition. The drainage was not up to the requirements in some places. The management was making some provisions to improve the sanitary condition, by building a system of masonry stoppings between the intake and the return, and on my last visit had partly completed a slab along the return air course to widen it and reduce the friction of air. This when completed will doubtless improve the sanitary condition of the mine.

Ronco Shaft.—This shaft is located on the Coal Lick Run branch of the Pennsylvania Railroad, and was sunk about fifty feet during the latter part of this year and was taken off the contractors hands January 1, 1902, and will be completed by the company. They expect to strike coal at about 200 feet. The shaft when completed will be eleven by twenty-four feet, with three compartments, two for cage ways and one for air, etc. There were twenty-five blocks of houses under construction at the last of the year and the company expects to erect 250 by-product ovens which will be located at Sharon. The coal will be shipped by rail and coked in by-product ovens at that place.

List of names of successful candidates for mine foremen that have been recommended by the various examining boards for first and second class mine foreman certificates, and also for fire boss certificates, dating back to 1889:

Successful applicants granted certificates in 1889:

I. G. Roby,

I. W. Reckard.

B. S. Ragger,

John Tocum,

Joseph Knapper,

Andrew Beatty,

John Boyle,

Morris Beedle,

Wm. Holsing,

Jobey Hanford.

Successful applicants granted certificates in 1890:

Hugh Ross,

Henry M. Wilson,

Edward Mooney,

James Phillips,

Archibald Cochran.

Thos. J. Hooper,

Harry Gardner,

Ellsworth Reepert.

Examining board: Wm. Duncan, Inspector; B. F. Keister, superintendent; C. B. Ross, miner.

Successful applicants granted certificates in 1894:

Jas. Eaton,

Fred. G. Smith,

J. H. Lane,

J. H. Lane,

Jas. Hart,

Jas. Hart,

Robt. Donaldson,

Robt. Donaldson,

Jas. S. Conner,

Jas. S. Conner,

J. J. Thomas.

J. J. Thomas,

Simeon Wilson,

John Boylon,

Henry Gray,

Peter Elias.

Examining board: Chas. Conner, Inspector; Harry Whyel, superintendent; C. B. Ross, miner.

Successful applicants granted certificates in 1895:

Staten A. Barnes,

Edward Curry,

Thos. Thirlwell.

John W. Foster,

Thos. Thirlwell,

Michael Calaghan,

Anthony Burns,

Peter Conner,

W. A. Doyle,

Jas. Exton.

Examining board: Chas. Conner, Inspector; Harry Whyel, superintendent; C. B. Ross, miner.

Successful applicants granted certificates in 1896:

Wm. G. Duncan,

Wm. G. Duncan.

John W. Foster.

Examining board: Chas. Conner, Inspector; Harry Whyel, superintendent; C. B. Ross, miner.

## Successful applicants granted certificates in 1897:

Chas. E. Porter,	Chas. E. Porter,
Joshua Taylor,	Jos. J. Jones,
Simeon Wilson.	Andrew Rudock,
	Luke Shaw,
	Henry Farrer,
	David Victor.

Examining board: Chas. Conner, Inspector; Harry Wheyl, superintendent; C. B. Ross, miner.

## Successful candidates granted certificates in 1899:

Wm. A. Doyle,	Jos. H. Williams,
David E. Jones,	D. B. Davis,
Luke Shaw.	John Havlicheck.

Examining board: Chas. Conner, Inspector; Harry Wheyl, superintendent; Elis Phillips, miner.

## Successful applicants granted certificates in 1900:

Robert Williams,	Robert Williams,
Thomas Charton,	Thos. Charlton,
Peter M. Conner,	Peter M. Conner,
Norman B. Leichter,	Norman B. Leichter,
John F. Dawson.	John F. Dawson,
	Jas. Cameron.

Examining board: Chas. Conner, Inspector; Harry Wheyl, superintendent; I. G. Roby, miner.

## Successful applicants who were granted certificates in 1901:

Frank Foreyder,	Daniel R. Blower,
Robt. Williams,	John Cole,
John Cole.	David Brown,
	Joshua Shaffer,
	Eugene Bell.

Examining board: Chas. Conner, Inspector; Harry Wheyl, superintendent; I. G. Roby, miner.

TABLE I—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Fifth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>H. C. Frick Coke Co.</b>						
Youngstown, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	P. P. Glenn, .....	Lemont Furnace, .....	S. W. B. of P. R. R. & B. & O.
Lemont No. 3, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	C. M. Shank, .....	Lemont Furnace, .....	S. W. B. of P. R. R. & B. & O.
Lemont No. 2, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	C. M. Shank, .....	Lemont Furnace, .....	S. W. B. of P. R. R. & B. & O.
Lemont No. 1, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	C. M. Shank, .....	Lemont Furnace, .....	S. W. B. of P. R. R. & B. & O.
Redstone No. 1, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	J. M. Shipson, .....	Redstone, .....	S. W. B. of P. R. R. & B. & O.
Redstone No. 2, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	J. M. Shipson, .....	Redstone, .....	S. W. B. of P. R. R. & B. & O.
Oilphant, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	R. M. Cook, .....	Redstone, .....	S. W. B. of P. R. R. & B. & O.
Wynn, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	R. M. Cook, .....	Redstone, .....	S. W. B. of P. R. R. & B. & O.
Kyle, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	Geo. B. Irvin, .....	Fairchance, .....	S. W. Branch of P. R. R.
Leisenring No. 2, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	Chas. J. Warnick, .....	West Leisenring, .....	S. W. Branch of P. R. R.
Leith, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	Harry Whyte, .....	Uniontown, .....	P. V. & C. B. of P. R. R.
<b>Continental Coke Co.</b>						
Continental No. 1, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	C. C. Gaud, .....	Uniontown, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
Continental No. 2, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	Enoch H. Abraham, .....	Uniontown, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
Continental No. 3, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	D. L. Wilhelm, .....	Newcomer, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
Continental No. 4, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	.....	.....	Coal Lick Run Branch of S. W. B. of P. R. R.
<b>S. W. Connellsville Coke Co.</b>						
Leckrone No. 1, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	John Harding, .....	Leckrone, .....	Smithfield Branch of B. & O. & P. R. R.
Leckrone No. 2, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	John Harding, .....	Leckrone, .....	Also Coal Lick.
Baflington, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	M. F. Pickard, .....	Leckrone, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
Footdale, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	M. F. Pickard, .....	Leckrone, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
<b>American Coke Co.</b>						
Lambert, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	C. S. Bankard, .....	Leckrone, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
Edenborn, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	T. D. Williams, .....	McClellandtown, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
Gates, .....	Fayette.	O. W. Kennedy.	Scottdale, .....	A. E. Reppert, .....	Ada, .....	Coal Lick Run Branch of S. W. B. of P. R. R.
<b>Oliver and Snider Steel Co.</b>						
Oliver mine No. 1, .....	Fayette.	F. C. Keighley.	Uniontown, .....	.....	.....	.....
Oliver mine No. 2, .....	Fayette.	F. C. Keighley.	Uniontown, .....	.....	.....	.....



M. R. C. Coal and Coke Co.	Fayette.	O. A. Blackburn.	Pittsburg.	John McVicker.	Roscoe.	River.
Washington.	Fayette.	O. A. Blackburn.	Pittsburg.	H. L. Henderson.	Roscoe.	River.
Little Alps.	Fayette.	O. A. Blackburn.	Pittsburg.	John Crumble.	Roscoe.	River.
Allee.	Fayette.	O. A. Blackburn.	Pittsburg.	John Porter.	Roscoe.	River.
Snow Hill.	Fayette.	O. A. Blackburn.	Pittsburg.	T. J. Cramble.	Roscoe.	River.
Anchor.	Fayette.	O. A. Blackburn.	Pittsburg.	T. J. Cramble.	Roscoe.	River.
Stony Hill.	Fayette.	O. A. Blackburn.	Pittsburg.	Wm. Gillie.	Brownsville.	River.
Chamomni.	Fayette.	O. A. Blackburn.	Pittsburg.	E. L. Morris.	Brownsville.	River.
Climax.	Fayette.	O. A. Blackburn.	Pittsburg.	Chas. Connor.	Fredericktown.	River.
Albany.	Fayette.	O. A. Blackburn.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
Crowthers.	Fayette.	O. A. Blackburn.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
Pittsburg Coal Co.	Fayette.	Geo. W. Schleudenberg.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
Hanna mine.	Fayette.	Geo. W. Schleudenberg.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
Grindstone.	Fayette.	Geo. W. Schleudenberg.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
Eleanor.	Fayette.	Geo. W. Schleudenberg.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
Smock.	Fayette.	Geo. W. Schleudenberg.	Pittsburg.	Chas. Connor.	Smock.	P. V. & C. B. of P. R. R. &
W. J. Ratney.	Fayette.	T. J. Mitchell.	Connellsville.	J. M. Franklin.	Mt. Braddock.	S. W. B. of P. R. R. & B. & O.
Mt. Braddock.	Fayette.	T. J. Mitchell.	Connellsville.	F. W. Cunningham.	Uniontown.	Coal Lick Run Branch of S. W.
Revere.	Fayette.	T. J. Mitchell.	Connellsville.	S. E. Graham.	Uniontown.	B. of P. R. R.
Pike.	Fayette.	W. J. Thomas.	Charleroi.	Robert Gillie.	Braznell.	River.
People's Coal Co.	Fayette.	W. J. Thomas.	Charleroi.	Robert Gillie.	Braznell.	P. V. & C. B. of P. R. R.
Lake Erie Gas Coal and Coke Co.	Fayette.	W. P. Bonney.	Erie, Ohio.	Robert Gillie.	Braznell.	P. V. & C. B. of P. R. R.
Summer.	Fayette.	W. P. Bonney.	Erie, Ohio.	Robert Gillie.	Braznell.	P. V. & C. B. of P. R. R.
Lafayette.	Fayette.	Geo. Whyte.	Uniontown.	Robert Gillie.	Braznell.	P. V. & C. B. of P. R. R.
Lafayette Coke Co.	Fayette.	Geo. Whyte.	Uniontown.	Robert Gillie.	Braznell.	P. V. & C. B. of P. R. R.
A. L. Keister & Co.	Fayette.	A. L. Keister.	Scottsdale.	M. A. McCoombs.	Waltersburg.	P. V. & C. B. of P. R. R.
Lindlin.	Fayette.	A. L. Keister.	Scottsdale.	M. A. McCoombs.	Waltersburg.	P. V. & C. B. of P. R. R.
Percy.	Fayette.	Louis DeSaules.	Percy.	Louis DeSaules, Jr.	Uniontown.	B. & O.
Percy Mining Co.	Fayette.	Louis DeSaules.	Percy.	Louis DeSaules, Jr.	Uniontown.	B. & O.
Stewart Iron Co., Ltd.	Fayette.	Samuel McClure.	Sharon.	Nathaniel McClure.	Uniontown.	B. & O.
Stewart.	Fayette.	Samuel McClure.	Sharon.	Nathaniel McClure.	Uniontown.	B. & O.
Atlas Coke Co.	Fayette.	Jas. Henderson.	Uniontown.	Jas. Henderson.	Uniontown.	B. & O.
Crossland.	Fayette.	Jas. Henderson.	Uniontown.	Jas. Henderson.	Uniontown.	B. & O.
Edward Snider.	Fayette.	Thos. Clark.	Uniontown.	Jas. Henderson.	Uniontown.	B. & O.
Snider.	Fayette.	Thos. Clark.	Uniontown.	Jas. Henderson.	Uniontown.	B. & O.
Fayette Coke Co.	Fayette.	Chas. E. Lenhart.	New Salem.	Reuben street.	New Salem.	Coal Lick B. of P. R. R.
Shamrock.	Fayette.	Chas. E. Lenhart.	New Salem.	Reuben street.	New Salem.	Coal Lick B. of P. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
Puritan Coke Co.	Fayette.	Wm. Parshall.	McClellandtown.			Coal Lick B. of P. R. R.
Parshall.	Fayette.	Francis Reeks.	Masontown.			Coal Lick Br. of P. R. R. & M. River.
Riverview Coal & Coke Co.	Fayette.					
Lombard.	Fayette.	R. L. Martin.	Pittsburg.	John Bitts.	Masontown.	Coal Lick B. of P. R. R.
Bessemer Coke Co.	Fayette.					
Griffin.	Fayette.	J. R. Cray.	Uniontown.	Wm. Duncan.	Smithfield.	Smithfield Branch of B. & O.
Acme.	Fayette.					
Acme Coke Co.	Fayette.	J. D. Boyd.	Uniontown.	B. E. Boyd.	Uniontown.	B. & O.
Uniontown Coke Co.	Fayette.					
Smithfield.	Fayette.	J. M. Taylor.	Uniontown.	Geo. A. Wetzel.	Smithfield.	B. & O.
Joseph Wharton.	Fayette.					
Bourne.	Fayette.	H. R. Sackett.	Outcrop.			B. & O.
H. R. Sackett C. & C. Co.	Fayette.					
Sackett.	Fayette.	Edwin N. Obl.	New Castle.	H. M. Wilson.	Gans.	B. & O.
Connellsville Coke Co.	Fayette.					
Connellsville No. 1.	Fayette.	I. W. Semans.	Uniontown.	Arthur Crossland.	Cheat Haven.	B. & O.
Ada Coal and Coke Co.	Fayette.	J. T. Fawcett.	Cheat Haven.	Geo. W. Gibson.	Cheat Haven.	B. & O.
Ada.	Fayette.					
Cheat Haven Coal Co.	Fayette.	E. A. Humphries.	Scottdale.	R. J. Humphries.	Vance's Mills.	P. V. & C. B. of P. R. R.
Eagle.	Fayette.					
Chester.	Fayette.	R. J. Humphries.	Vance's Mills.			P. V. & C. B. of P. R. R.
E. A. Humphries & Co.	Fayette.					
Bute Run C. & C. Co., Ltd.	Fayette.					
Florence.	Fayette.					
Isaac Taylor & Co.	Fayette.	Isaac Taylor.	Uniontown.			P. V. & C. B. of P. R. R.
Mt. Hope.	Fayette.					

Colonial Coke Co.	Payette.	W. H. Warner.	Cleveland, Ohio.	Joseph Baker.	Smock.	P. V. & C. B. of P. R. R.
Colonial.						
Penn Gas Coal and Coke Co.	Payette.	S. W. Henshaw.	Uniontown.	S. W. Henshaw.	Uniontown.	B. & O.
Penn.						
Ronco.	Payette.	W. T. Lewis.	Uniontown.			Coal Lick Run Br. of P. R. R.

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Fifth Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
H. C. Frick Coke Co.														
Leisenring No. 2.	Fayette.	24,271	8,198	4,245	375,570	241,551	560	299	478	1	2	.....	750	70
Yonestown.	Fayette.	.....	11,628	8,477	172,559	100,023	241	304	228	.....	.....	.....	.....	28
Lemont No. 1.	Fayette.	.....	5,728	7,145	208,767	133,529	227	280	228	.....	.....	.....	.....	28
Lemont No. 2.	Fayette.	32,736	3,188	2,745	261,711	151,063	320	261	316	1	1	.....	50	38
Leith.	Fayette.	15	9,180	2,917	242,180	153,739	308	304	325	.....	.....	.....	.....	39
Leisong.	Fayette.	.....	16,000	2,718	355,316	191,665	445	300	329	.....	.....	.....	.....	38
Chilphant.	Fayette.	20	1,228	100,299	122,375	122,375	252	264	243	.....	.....	60	25	31
Kyle.	Fayette.	4,284	2,464	1,767	250,454	161,255	393	303	331	4	3	.....	.....	52
Wynn.	Fayette.	.....	1,074	4,463	48,354	64,278	159	280	152	.....	.....	200	.....	11
Total.	.....	29,688	57,388	26,700	2,408,813	1,322,758	2,759	298	2,719	11	10	300	825	355
Continental Coke Co.														
Continental No. 1.	Fayette.	.....	2,417	328	59,765	24,540	224	180	180	.....	.....	.....	.....	12
Continental No. 2.	Fayette.	.....	4,750	1,214	162,257	104,185	390	303	307	.....	.....	.....	52,000	29
Continental No. 3.	Fayette.	.....	3,523	2,941	263,686	131,253	340	262	266	1	2	120	391,000	23
Total.	.....	.....	10,688	4,463	465,708	259,988	824	258	753	1	3	120	82,000	64
S. W. Connellsville Coke Co.														
Leewards.	Fayette.	1,213	4,200	2,521	333,250	230,000	400	307	550	1	1	40	102,510	45
Bullington.	Fayette.	.....	4,068	.....	201,300	224,406	224	406	402	.....	.....	.....	49,008	35
Fordale.	Fayette.	.....	3,250	1,212	207,564	155,000	400	310	425	.....	.....	.....	55,530	30
Total.	.....	1,213	12,518	4,207	672,372	435,900	1,024	271	1,178	1	4	40	207,558	110





TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Colonial, colonial trade.	Fayette.	.....	30	466	86,647	57,224	98	275	95	2	.....	1,200	40	9
Hero, Hero Coal and Coke Co.	Fayette.	21,650	24	150	39,800	12,600	30	302	59	.....	.....	600	.....	4
A. L. Klester & Co.	Fayette.	3,624	2,765	773	85,809	53,289	180	249	153	2	1	800	2,000	15
Lafayette Coke Co	Fayette.	16,085	1,080	500	17,655	14,254	80	229	107	.....	.....	.....	.....	7
Percy Mining Co.	Fayette.	9,740	368	.....	26,719	16,581	36	311	55	.....	.....	.....	.....	8
Stewart Iron Co., Ltd.	Fayette.	.....	4,248	625	97,102	81,481	155	276	158	.....	2	.....	.....	10
Stewart.	Fayette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crossland, Atlas Coke Co.	Fayette.	.....	302	106	81,816	55,150	100	308	100	.....	2	15	.....	9
Snider, John Snider & Co.	Fayette.	.....	.....	6,893	6,893	.....	.....	249	9	.....	.....	35	.....	2
Fayette Coke Co.	Fayette.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shamrock, Fayette Coke Co.	Fayette.	.....	672	573	67,275	49,247	150	268	130	.....	.....	1,600	.....	8
Parshall, Puritan Coke Co.	Fayette.	1,438	25	30	7,583	4,660	32	112	42	.....	.....	.....	300	4

Elkview Coal and Coke Co.	Payette.	29,600	4,000	3,000	36,000	239	48	200	2,000	6
Donald,	Payette.	293		18	112,458	78,820	304	296	351	26
Griffin,	Payette.									
Acme,	Payette.			33	47	27,080	57	248	58	4
Acme,	Payette.									
Uniontown Coke Co.	Payette.	2,688	12	285	15,420	7,750	19	288	26	1
Smithfield,	Payette.									
Union Gas Coal and Coke Co.	Payette.	7,346		250	7,506			306	9	1
Penn.	Payette.									
H. R. Sackett Coke Co.	Payette.	3,062	29	60	11,800	5,000	20	202	37	2
Sackett,	Payette.									
Burns,	Payette.			347	64,131	43,950	86	280	80	6
Joseph Wharton,	Payette.									
Connellsville Coke Co.	Payette.		52	6	13,674	10,032	81	95	90	5
Connellsville No. 1,	Payette.									
Isaac Taylor & Co.	Payette.		521		72,092	47,046	80	294	74	8
Mt. Hope,	Payette.									
Cheat Haven Coal Co.	Payette.	27,202			27,202			219	57	4
Eagle,	Payette.									
Ada Coal and Coke Co.	Payette.	5,502		50	7,697	2,756	18	160	24	2
Grand total,	Payette.	2,118,654	166,093	60,346	7,204,023	3,200,546	8,503	238	11,002	1,055
Ada,										

## Recapitulation.

H. C. Frick Coke Co.	Payette.	26,700	2,108,813	1,322,758	2,759	298 1-9	2,719	11	10	360	825	365
Continental Coke Co.	Payette.	4,402	495,508	299,988	824	258 1-3	752	1	3	120	82,000	64
Southwest Connellsville Coke Co.	Payette.	4,207	672,372	435,900	1,024	271 1-3	1,138	1	4	40	207,553	100
American Coke Co.	Payette.	3,342	212,383	83,412	708	242 1-3	842	1	7	8	86,100	64
Oliver & Spider Steel Co.	Payette.	2,538	698,070	454,987	708	237	776	2	2	9,510	100	153
M. R. C. Coal and Coke Co.	Payette.	581	1,470,000			177 1/2	1,275	5	5	2	775	34
Pittsburg Coal Co.	Payette.	940	178,988	132,000	60	9-16	1,275	5	5	2	600	70
W. J. Rainey,	Payette.	2,500	288,320	132,000	60	9-16	820	3	2	30	6,500	173
Individual collieries,	Payette.	15,945	1,158,369	600,901	1,600	203 10-27	216	5	9	6,873	45,415	173

TABLE II—Continued.

Names of Operators.	County.	Number of Boilers.			Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Horse power.				Steam.	Air.	Electric.							
		Cylindrical.	Tubular.	Horse power.											
H. C. Frick Coke Co.,	Fayette,	40	1,606	24	3,151	4,757	10	.....	35	4,415	23	10,169	5,422	1	2
Continental Coke Co.,	Fayette,	.....	.....	19	1,850	1,850	3	.....	8	1,400	4	984	329	2	3
South West Connellsville Coke Co.,	Fayette,	.....	.....	16	2,400	2,400	.....	.....	9	1,000	3	888	300	6	3
American Coke Co.,	Fayette,	.....	.....	19	2,266	2,266	3	.....	4	545	5	1,025	483	1	3
Oliver & Snider Steel Co.,	Fayette,	.....	.....	16	840	840	3	.....	7	960	1	1,700	500	1	.....
M. R. C. Coal and Coke Co.,	Fayette,	.....	.....	26	860	2,360	.....	.....	19	1,409	9	1,603	683	4	1
Pittsburg Coal Co.,	Fayette,	1	60	4	380	440	.....	.....	9	1,110	1	1,650	300	1	.....
W. J. Rainey,	Fayette,	.....	.....	15	1,400	1,400	1	.....	3	1,500	4	1,112	585	2	4
Individual collieries,	Fayette,	7	280	27	1,098	2,004	1	.....	26	2,860	14	1,214	584	4	2

TABLE III—Showing the number of employees at each colliery in the Fifth Bituminous District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers, and clerks.		All other employees.	Total outside.
H. C. Frick Coal Co.																		
Leisenring No. 2, .....	Fayette, .....	1	3	224	18	30	8	10	294	2	6	7	1	166	3	.....	184	478
Youngstown No. 2, .....	Fayette, .....	1	2	92	7	13	1	6	112	.....	3	9	.....	92	1	.....	106	228
Lemont No. 1, .....	Fayette, .....	1	1	110	10	14	.....	3	131	.....	1	.....	.....	85	.....	.....	138	238
Lemont No. 2, .....	Fayette, .....	1	1	150	12	21	2	2	182	.....	1	.....	.....	144	.....	.....	154	346
Leith, .....	Fayette, .....	1	1	130	12	28	4	4	182	.....	1	.....	.....	122	.....	.....	141	323
Redstone, .....	Fayette, .....	2	3	155	15	23	1	5	204	3	7	12	.....	170	.....	.....	195	434
Oliphant, .....	Fayette, .....	1	1	129	5	12	.....	9	148	.....	1	4	.....	85	.....	.....	95	213
Kyle, .....	Fayette, .....	1	1	150	5	17	3	6	183	1	6	6	.....	132	.....	.....	148	331
Wynn, .....	Fayette, .....	1	1	60	2	7	.....	5	76	1	2	4	.....	48	.....	.....	57	133
Total, .....	.....	10	19	1,191	88	165	19	50	1,542	12	40	63	.....	1,041	21	.....	1,177	2,719
Continental Coke Co.																		
Continental No. 1, .....	Fayette, .....	1	1	105	2	4	1	10	124	1	2	4	.....	47	.....	.....	56	180
Continental No. 2, .....	Fayette, .....	1	2	146	3	16	6	17	191	3	5	4	1	100	.....	.....	116	307
Continental No. 3, .....	Fayette, .....	1	1	131	3	13	2	9	170	1	4	6	.....	83	.....	.....	96	266
Total, .....	.....	3	4	382	8	33	9	36	485	5	11	14	1	230	7	.....	268	753
South West Connellsville Coke Co.																		
Leckrone, .....	Fayette, .....	2	.....	210	4	21	2	3	242	3	7	4	.....	280	.....	.....	308	550
Buffington, .....	Fayette, .....	1	2	69	12	10	.....	3	93	3	5	7	.....	53	.....	.....	70	163
Footdale, .....	Fayette, .....	2	1	200	10	20	3	16	252	1	8	6	.....	154	.....	.....	173	425
Total, .....	.....	5	3	470	26	51	5	27	587	7	20	17	.....	497	10	.....	551	1,138

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.								Occupations of Persons Employed Outside.								Grand total, inside and outside.	
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers, and clerks.	All other employes.	Total outside.		
<b>American Coke Co.</b>																			
Gates, .....	Fayette, .....	1	1	75	15	11	4	40	147	1	19	9	.....	.....	.....	35	57	2.4	
Lambert, .....	Fayette, .....	1	1	127	24	8	6	2	160	1	3	8	.....	96	.....	169	278	169	
Edenborn, .....	Fayette, .....	1	1	111	20	13	4	62	212	2	2	8	.....	130	.....	148	360	360	
Total, .....	.....	3	3	313	59	32	14	104	528	4	21	22	.....	256	6	35	314	892	
<b>Oliver and Smiler Steel Co.</b>																			
Oliver No. 1, .....	Fayette, .....	2	3	178	.....	18	.....	33	214	1	7	5	.....	119	2	.....	134	348	
Oliver No. 2, .....	Fayette, .....	1	3	204	.....	29	3	38	278	1	6	4	.....	137	2	.....	150	438	
Total, .....	.....	3	6	382	.....	47	3	71	492	2	13	9	.....	256	4	.....	284	776	
<b>M. A. C. Coal and Coke Co.</b>																			
Washington, .....	Fayette, .....	1	1	95	.....	12	2	7	115	.....	.....	.....	.....	.....	.....	8	15	130	
Little Alps, .....	Fayette, .....	1	1	36	.....	3	1	1	38	.....	.....	.....	.....	.....	.....	2	4	42	
Albee, .....	Fayette, .....	1	2	150	.....	13	4	6	182	.....	.....	.....	.....	.....	.....	8	17	199	
Snow Hill, .....	Fayette, .....	1	1	150	.....	12	4	6	175	.....	.....	.....	.....	.....	.....	12	18	193	
Anchor, .....	Fayette, .....	1	1	74	.....	12	1	19	107	.....	.....	.....	.....	.....	.....	8	15	132	
Stony Hill, .....	Fayette, .....	1	1	75	.....	10	2	4	92	.....	.....	.....	.....	.....	.....	4	9	101	
Chamouni, .....	Fayette, .....	1	1	276	.....	21	3	19	307	.....	.....	.....	.....	.....	.....	24	32	399	
Climax, .....	Fayette, .....	1	1	40	.....	5	.....	2	49	.....	.....	.....	.....	.....	.....	1	5	51	
Crowthers, .....	Fayette, .....	1	1	75	.....	70	1	3	89	.....	.....	.....	.....	.....	.....	7	12	171	
Albany, .....	Fayette, .....	1	2	150	.....	12	2	18	185	.....	.....	.....	.....	.....	.....	11	20	295	
Total, .....	.....	10	11	1,014	.....	116	20	69	1,339	.....	21	24	.....	.....	18	85	147	1,476	



Pittsburg Coal Co.															
Smack, .....	Fayette,.....	1	1	47	2	3	1	4	59	1	2	.....	1	6	71
Eleonor, .....	Fayette,.....	1	1	52	2	4	.....	1	60	1	2	1	.....	5	10
Grindstone, .....	Fayette,.....	1	2	64	1	4	.....	1	77	1	4	.....	1	6	91
Hanna, .....	Fayette,.....	1	.....	31	1	3	1	2	39	1	1	.....	1	1	43
Total, .....	.....	4	3	194	6	14	3	11	235	4	7	7*	.....	4	275
W. J. Rainey.															
Mt. Bradlock mine, .....	Fayette,.....	1	2	100	10	14	.....	6	130	2	8	9	.....	75	255
Revere Nos. 1 and 2, .....	Fayette,.....	2	.....	145	10	12	1	2	172	4	25	7	.....	400	614
Total, .....	.....	3	2	245	20	26	1	8	302	6	31	16	.....	475	839
People's Coal Co.															
Pike, .....	Fayette,.....	1	1	155	.....	12	.....	15	134	1	4	3	.....	2	209
Lake Erie Gas Coal Co.															
Summer, .....	Fayette,.....	1	1	85	7	6	1	1	102	1	2	4	.....	3	115
E. A. Humphries & Co.															
Chester, .....	Fayette,.....	1	.....	33	3	3	.....	2	42	.....	1	4	.....	15	64
Bute Run Coal and Coke Co.															
Florence, .....	Fayette,.....	1	.....	12	1	1	.....	.....	15	.....	.....	.....	8	1	24
Colonial Coke Co.															
Colonial, .....	Fayette,.....	1	.....	45	2	5	.....	.....	53	1	1	1	.....	37	35
Hero Coal and Coke Co.															
Hero, .....	Fayette,.....	1	.....	28	.....	4	1	.....	34	1	1	1	.....	21	59
A. L. Keister & Co.															
Lincoln, .....	Fayette,.....	1	1	60	.....	9	.....	10	81	2	4	.....	60	2	153
Lafayette Coke Co.															
Lafayette, .....	Fayette,.....	1	.....	60	2	5	.....	.....	68	1	2	1	.....	32	107
Percy Mining Co.															
Percy, .....	Fayette,.....	1	.....	20	6	4	.....	1	32	.....	1	1	.....	19	55
Stewart Iron Co., Ltd.															
Stewart, .....	Fayette,.....	1	1	60	.....	6	.....	12	80	1	2	3	.....	70	158
Atlas Coke Co.															
Crossland, .....	Fayette,.....	1	.....	45	2	4	.....	1	53	1	1	1	.....	42	100
John Snider & Co.															
Snyder, .....	Fayette,.....	.....	.....	7	.....	1	.....	.....	8	1	.....	.....	.....	.....	9
Fayette Coke Co.															
Shampack, .....	Fayette,.....	1	.....	71	.....	5	.....	2	78	1	2	2	.....	42	139

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside outside.		
		Inside foreman or mine boss.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufac- ture of coke.	Superintendents, bookkeepers and clerks.		All other employes.	Total outside.
Puritan Coke Co.	Fayette,.....	1	.....	22	2	2	.....	.....	27	.....	.....	1	.....	13	1	.....	15	42
Parshall, .....	Fayette,.....	1	.....	30	.....	2	.....	1	34	1	2	3	.....	.....	3	5	14	48
Riverview Coal and Coke Co.	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Donald, .....	Fayette,.....	1	.....	116	4	7	2	5	135	1	3	.....	.....	210	2	.....	216	351
Bessemer Coke Co.	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Griffin, .....	Fayette,.....	1	.....	30	2	2	.....	2	37	.....	1	.....	.....	20	.....	.....	21	58
Acme Coke Co.	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Uniontown Coke Co.	Fayette,.....	1	.....	8	.....	1	.....	.....	10	.....	.....	.....	.....	16	.....	.....	16	26
Smithfield, .....	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penn Coke Co.	Penn, .....	.....	.....	6	.....	1	.....	1	8	.....	.....	.....	.....	.....	1	.....	1	9
H. R. Sackett Coal and Coke Co.	Fayette,.....	1	.....	12	.....	1	.....	1	15	.....	1	.....	.....	20	1	.....	22	37
Sackett, .....	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Joseph Wharton.	Fayette,.....	1	.....	38	2	5	.....	.....	46	.....	1	.....	.....	31	2	.....	34	80
Bourne, .....	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Connellsville Coke Co.	Fayette,.....	1	.....	40	2	3	1	3	50	1	1	4	1	22	2	.....	40	90
Connellsville No. 1, .....	Fayette,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Ada, .....	Fayette, .....	1	.....	15	2	1	1	.....	20	.....	1	.....	1	.....	1	.....	1	.....	4	24
Ada Coal and Coke Co., .....																				
Mt. Hope, .....	Fayette, .....	1	.....	40	2	5	.....	.....	47	1	.....	1	.....	24	1	24	27	74		
Cheat Haven Coal Co., .....																				
Eagle, .....	Fayette, .....	1	.....	44	1	4	.....	.....	50	1	2	.....	1	.....	1	2	7	57		

## Recapitulation.

H. C. Erick Coke Co., .....	Fayette, .....	10	19	1,185	88	165	19	50	1,536	12	40	63	.....	1,041	21	.....	1,178	2,719
Continental Coke Co., .....	Fayette, .....	3	4	392	8	33	9	36	485	5	11	14	.....	1	7	.....	268	1,753
South Connelsville Coke Co., .....	Fayette, .....	5	3	470	26	51	5	27	587	7	20	17	.....	.....	10	.....	551	1,138
American Coke Co., .....	Fayette, .....	3	3	313	59	32	14	104	528	4	21	22	.....	.....	6	35	314	575
Oliver and Snider Steel Co., .....	Fayette, .....	3	6	362	.....	47	3	71	492	2	13	9	.....	.....	4	.....	137	1,456
M. R. C. Coal and Coke Co., .....	Fayette, .....	10	11	1,114	.....	116	20	69	1,340	.....	20	27	.....	.....	18	.....	147	1,275
Pittsburg Coal Co., .....	Fayette, .....	4	3	194	6	14	3	11	235	.....	2	7	.....	.....	4	18	40	839
W. J. Rainey, .....	Fayette, .....	3	2	245	20	25	1	15	181	6	31	16	.....	.....	9	62	537	899
People's Coal Co., .....	Fayette, .....	1	1	153	7	6	.....	4	102	1	4	3	.....	.....	2	15	25	209
Lake Erie Gas, Coal and Coke Co., .....	Fayette, .....	1	1	153	7	6	.....	4	102	1	2	4	.....	.....	3	8	13	115
Individual operators, .....	Fayette, .....	21	1	842	33	81	5	41	1,024	14	27	27	.....	3	36	27	827	1,850

TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
H. C. Frick Coke Co., .....	Fayette, .....	23 2-3	23 7-9	25 8-9	25 8-9	25 8-9	25 8-9	26	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
Continental Coke Co., .....	Fayette, .....	27	23 9-9	26	25	25 1-8	25 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
South Mountain Coke Co., .....	Fayette, .....	26 1/2	24	26	26	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
Amick Coal Co., .....	Fayette, .....	26 1/2	23 1/2	27 1/2	26 1/2	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
Oliver & Snider Steel Co., .....	Fayette, .....	27 1-9	24	27 1/2	26 1/2	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
M. R. C. Coal and Coke Co., .....	Fayette, .....	27 1-9	24	27 1/2	26 1/2	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
Pittsburgh Coal Co., .....	Fayette, .....	27 1-9	24	27 1/2	26 1/2	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
W. J. Railway, .....	Fayette, .....	27 1-9	24	27 1/2	26 1/2	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
People's Coal Co., .....	Fayette, .....	27 1-9	24	27 1/2	26 1/2	27 1-8	27 1-8	26 1/2	25 1-9	23 4	25	25 8-9	23 4-9	298 1-9
Laake Erie Gas, Coal and Coke Co., .....	Fayette, .....	15	13	4	21	22	21	21 1/2	23 1/2	23 1/2	24	24	24 1/2	241 1/2
Individual operators, .....	Fayette, .....	23	29	20	25	24	23	21 1/2	23 1/2	23 1/2	24	24	24 1/2	241 1/2

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Fifth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	(Occupation.				Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 15	Steve Shokane, .....	Slav, .....	Miner, .....	46	M.	1					Kyle, .....	Fayette.	Fatally injured by a fall of slate.
Feb. 2	John Musar, .....	Slav, .....	Miner, .....	40	S.	1					Lincoln, .....	Fayette.	Fatally burned by a blown out shot; died Feb. 6th in hospital.
11	James Plunkett, .....	American, ..	Miner, .....	63	M.	1					Washington, .....	Fayette.	Instantly killed by a fall of slate.
14	George Stiffy, .....	Slav, .....	Miner, .....	36	M.	1					Chambersburg, .....	Fayette.	Instantly killed by a fall of slate.
18	Dominic Dunyan, .....	Italian, .....	Miner, .....	25	S.	1					Grindstone, .....	Fayette.	Instantly killed by a premature explosion of a blast.
March 21	John Juback, .....	Slav, .....	Miner, .....	29	M.	1					Leith, .....	Fayette.	Instantly killed by a fall of slate.
19	William McFadden, .....	American, ..	Driver, .....	31	S.	1					Kyle, .....	Fayette.	Fatally injured; killed by a mudslide.
25	Thomas Montuth, .....	American, ..	Driver, .....	31	S.	1					Acme, .....	Fayette.	Fatally injured; caught between car and rib.
25	James Wilson, .....	American, ..	Miner, .....	33	S.	1					Gates, .....	Fayette.	Fatally burned by an explosion of gas.
25	Gibson Gilmore, .....	American, ..	Miner, .....	42	M.	1					Gates, .....	Fayette.	Fatally burned by an explosion of gas.
25	James Murphy, .....	American, ..	Miner, .....	24	M.	1					Gates, .....	Fayette.	Fatally burned by an explosion of gas.
25	George Pedesco, .....	Slav, .....	Miner, .....	23	M.	1					Gates, .....	Fayette.	Fatally burned by an explosion of gas.
25	John Burraw, .....	Austrian, ..	Miner, .....	33	M.	1					Snow Hill, .....	Fayette.	Fatally injured by a fall of slate.
6	Charles Ferry, .....	American, ..	Driver, .....	19	M.	1					Oliver No. 2, .....	Fayette.	Instantly killed; caught between car and rib.
6	John Namet, .....	Austrian, ..	Miner, .....	30	M.	1					Leisensong No. 2, .....	Fayette.	Instantly killed by a fall of slate.
12	Mike Popish, .....	Slav, .....	Miner, .....	24	S.	1					Grindstone, .....	Fayette.	Instantly killed by a fall of slate.
30	John Morley, .....	American, ..	Driver, .....	21	S.	1					Mt. Braddock, .....	Fayette.	Instantly killed; being thrown against roof.
June 25	Paul Kuvak, .....	Slav, .....	Loader, .....	40	M.	1					Alice, .....	Fayette.	Instantly killed by a fall of slate.
July 27	Thomas Gibson, .....	Irish, .....	Driver, .....	40	M.	1					Leith, .....	Fayette.	Instantly killed between car and rib.
Aug. 1	William Hughes, .....	American, ..	Driver, .....	24	S.	1					Edenborn, .....	Fayette.	Instantly killed by falling under car.
2	Mike Maczinski, .....	American, ..	Miner, .....	20	S.	1					Lemont No. 2, .....	Fayette.	Instantly killed by a fall of slate.
21	John Buckett, .....	Slav, .....	Miner, .....	24	M.	1					Oliver No. 2, .....	Fayette.	Instantly killed by a fall of slate.
22	Mike Polostski, .....	Slav, .....	Miner, .....	24	M.	1					Alice, .....	Fayette.	Instantly killed by a fall of coal.
23	Jacob Smal, .....	Austrian, ..	Miner, .....	38	M.	1					Gates, .....	Fayette.	Instantly killed by slate falling from roof.
5	James Shortuse, .....	English, ....	Driver, .....	38	M.	1					Leith, .....	Fayette.	Fatally injured by falling under car.
14	Robert Manst, .....	American, ..	Driver, .....	26	M.	1					Lemont No. 1, .....	Fayette.	Fatally injured; caught between post and car.



TABLE IV--Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct. 2	Jas. N. Simpson, .....	American, ..	Boss hauler, .....	35	M. ....	1	4	Colonial, .....	Payette, ..	Fall of roof.
24	Thos. H. Ashman, .....	English, ....	Rope rider, .....	25	S. ....	1	4	Colonial, .....	Payette, ..	Fall of roof.
Nov. 9	Jasper Craig, .....	American, ..	Machinist, .....	39	M. ....	1	4	Colonial, .....	Payette, ..	Instantly killed by cars.
15	Tony McGrilla, .....	Italian, ....	Miner, .....	33	M. ....	1	5	Lemont No. 3, .....	Payette, ..	Instantly killed by a fall of coal.
	Mike Sucha, .....	Slav, .....	Laborer, .....	25	M. ....	1	1	Revere, .....	Payette, ..	Instantly killed by fan catching his clothes.
22	Ephraim Dixon, .....	American, ..	Driver, .....	19	M. ....	1	....	Revere, .....	Payette, ..	Instantly killed; caught between car and rib.
22	Mike McCormick, .....	Irish, .....	Watchman, .....	50	M. ....	1	2	Edenborn, .....	Payette, ..	Instantly killed by falling into shaft.
22	William L. Codey, .....	American, ..	Roadman, .....	41	M. ....	1	4	Kyle, .....	Payette, ..	Instantly killed by a fall of slate.
22	Joseph Zwick, .....	Slav, .....	Miner, .....	23	M. ....	1	2	Kyle, .....	Payette, ..	Instantly killed by a fall of slate.
28	John Siffka, .....	American, ..	Miner, .....	34	S. ....	....	....	Leckrone No. 2, .....	Payette, ..	Fatally injured by a fall of slate.
3	William C. Heath, .....	American, ..	Mining engineer, .....	32	S. ....	....	....	Grindstone, .....	Payette, ..	Fatally injured by an explosion of gas.
3	Charles Zimmerman, .....	American, ..	Mining engineer, .....	19	S. ....	....	....	Grindstone, .....	Payette, ..	Fatally injured by an explosion of gas.
7	George Crosby, .....	American, ..	Mining engineer, .....	27	S. ....	....	....	Continental No. 3, .....	Payette, ..	Instantly killed by an explosion of gas.
12	John Katson, .....	Slav, .....	Miner, .....	27	M. ....	1	1	Anchor, .....	Payette, ..	Instantly killed by a fall of slate.
	Andy Donish, .....	Slav, .....	Miner, .....	34	M. ....	1	....	Anchor, .....	Payette, ..	Instantly killed by fall of coal.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Fifth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 1	Steve Omaska, .....	Slav, .....	Miner, .....	31	S	Gates, .....	Fayette, .....	Severely bruised by a fall of slate.
5	W. C. Miller, .....	American, .....	Driver, .....	34	M	Kyle, .....	Fayette, .....	Collar bone broken by timber.
18	Nabert Johnson, .....	American, .....	Miner, .....	40	S	Kyle, Hill, .....	Fayette, .....	Fracture of leg by fall of slate.
Feb. 1	John Loves, .....	Austrian, .....	Miner, .....	30	M	Oliver No. 2, .....	Fayette, .....	Leg broken by a fall of slate.
2	John Bobic, .....	Slav, .....	Miner, .....	31	S	Lincoln, .....	Fayette, .....	Severely injured by a premature blast.
4	Joseph Goowin, .....	American, .....	Driver, .....	22	S	Footdale, .....	Fayette, .....	Three ribs broken; caught between car and rib.
15	Jesse Harrington, .....	American, .....	Miner, .....	36	S	Climax, .....	Fayette, .....	Severely injured by a fall of coal and slate.
15	Frank Baylis, .....	American, .....	Miner, .....	36	S	Kyle, .....	Fayette, .....	Painfully injured by a fall of coal and slate.
March 2	George Dennison, .....	American, .....	Miner, .....	38	M	Stewart, .....	Fayette, .....	Two ribs broken by a fall of slate.
9	Henry Rosner, .....	German, .....	Dumper, .....	19	S	Crossland, .....	Fayette, .....	Injured at the tingle.
19	Liverng Bittle, .....	American, .....	Miner, .....	13	S	Crossland, .....	Fayette, .....	Painfully bruised; caught between car and rib.
April 15	John Corpinski, .....	Pole, .....	Miner, .....	31	M	Leith, .....	Fayette, .....	Leg broken by a fall of slate.
17	Patrick O'Riwick, .....	Irish, .....	Fire boss, .....	44	M	Leisnering No. 2, .....	Fayette, .....	Injured by a fall of coal and slate.
25	Joseph Shetland, .....	American, .....	Driver, .....	21	S	Mt. Braddock, .....	Fayette, .....	Leg broken by falling in front of cars.
June 3	John Mackey, .....	Finn, .....	Miner, .....	39	S	Washington, .....	Fayette, .....	Collar bone broken by a fall of slate.
11	Henry Brockway, .....	American, .....	Cager, .....	28	M	Continental No. 1, .....	Fayette, .....	Collar bone broken by a fall of slate.
22	George Hocrin, .....	Hungarian, .....	Miner, .....	25	M	Sumner, .....	Fayette, .....	Bruised about body by a fall of slate.
July 11	George Pievoznak, .....	Slav, .....	Miner, .....	30	M	Lemont No. 2, .....	Fayette, .....	Ankle broken by a fall of coal and slate.
13	Frank Scipion, .....	Austrian, .....	Miner, .....	35	S	Oliver No. 1, .....	Fayette, .....	Leg broken by a fall of coal and slate.
13	Paul Zorna, .....	Pole, .....	Miner, .....	44	M	Continental No. 3, .....	Fayette, .....	Painfully bruised about body by a fall of roof.
20	John Yonnick, .....	Pole, .....	Miner, .....	43	M	Continental No. 3, .....	Fayette, .....	Back broken by a fall of slate.
27	Mike Bushnack, .....	Slav, .....	Miner, .....	43	M	Sumner, .....	Fayette, .....	Fracture of leg; coal fell from face of room.
Aug. 27	Joseph Roman, .....	Austrian, .....	Miner, .....	35	M	Revere, .....	Fayette, .....	Ribs fractured by a fall of coal and slate.
24	Mike Gohorky, .....	Italian, .....	Miner, .....	14	S	Albany, .....	Fayette, .....	Broken by a fall of slate.
26	Anthony Berk, .....	Irish, .....	Roadman, .....	40	M	Buffington, .....	Fayette, .....	Severely bruised by fall of slate.
26	William Smith, .....	American, .....	Miner, .....	21	M	Wynn, .....	Fayette, .....	Injured by a premature blast.
Sent. 6	William Murey, .....	English, .....	Miner, .....	41	M	Smock, .....	Fayette, .....	..... by a fall of slate.

TABLE V.—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct. 30	Clement Devite, .....	Italian, .....	Hitcher, .....	28	S	Lockport No. 1, .....	Payette, .....	Leg crushed between cars.
	Jacob Rednick, .....	Irish, .....	Miner, .....	35	M	Oliver No. 1, .....	Payette, .....	Three ribs broken by a fall of slate in working place.
Nov. 28	John Burrow, .....	American, .....	Driver, .....	14	S	Youngstown, .....	Payette, .....	Leg broken; lashed by a mule.
	Mike Rossilla, .....	Slav, .....	Driver, .....	20	S	Gates, .....	Payette, .....	Bruised about body; caught between rib and car.
9	William Eale, .....	American, .....	Miner, .....	19	S	Allee, .....	Payette, .....	Arm broken and collar bone injured; fall of slate.
12	William Page, .....	Italian, .....	Miner, .....	19	S	Wynn, .....	Payette, .....	Severely injured by fall of slate.
14	Thomas Monahan, .....	Irish, .....	Miner, .....	65	S	Stewart, .....	Payette, .....	Severely injured by fall of slate.
18	William Feather, .....	American, .....	Driver, .....	26	M	Gates, .....	Payette, .....	Struck between car and door.
1	Emil Fallacher, .....	American, .....	Machine runner, .....	28	M	Burlington, .....	Payette, .....	Leg fractured by a fall of slate.
26	Joseph Shatalarger, .....	American, .....	Roachman, .....	21	M	Kyle, .....	Payette, .....	Severely lamed by fall of slate.
28	John Hinch, .....	Austrian, .....	Miner, .....	21	M	Leasburg No. 2, .....	Payette, .....	Severely lamed by fall of slate.
28	Michael Hinch, .....	Slav, .....	Miner, .....	27	M	Leasburg, .....	Payette, .....	Severely lamed by fall of slate.
28	George Bonack, .....	Slav, .....	Miner, .....	37	M	Lambert, .....	Payette, .....	These four men were injured by reason of the engineer failing to keep control of his engine while lowering them into the shaft.
28	Peter Molatinsky, .....	Slav, .....	Miner, .....	38	M	Lambert, .....	Payette, .....	Bruised about body by mine locomotive.
28	Lester Blaney, .....	American, .....	Driver, .....	30	M	Connellsville No. 1, .....	Payette, .....	Painfully injured by an explosion of gas.
28	Carrol Kerney, .....	American, .....	Mining engineer, .....	29	M	Grindstone, .....	Payette, .....	Painfully injured, thrown against rib.
28	John Hudzel, .....	American, .....	Driver, .....	28	M	Griffin, .....	Payette, .....	

# Sixth Bituminous District.

CAMBRIA AND SOMERSET COUNTIES.

Johnstown, Pa., February 27, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of presenting herewith my report as Inspector of the Sixth Bituminous District for the year 1901. It contains the usual tables, with an additional one on ventilation, giving the method, capacity of ventilators, and number of air splits in each mine.

I am pleased to report a reduction in the number of accidents in the district and a general improvement in the sanitary condition of the mines. The total production of coal was 6,848,954 tons, the fatal accidents numbered eighteen. This shows a production of 380,497 tons per fatal accident, and 559 persons were employed per fatal accident. I consider this a creditable showing, but hope and expect better results in the future if the vigilance now exercised by mine officials is continued, and there is a strict adherence by the men to the rules and regulations laid down by the law and the operators, to prevent accidents.

Remarks on the ventilation of mines, accidents, etc., will be found in another part of this report.

Respectfully,

J. T. EVANS.

## Statistical Table.

Number of mines in the district, .....	82
Number of mines reporting production, .....	80
Number of tons of coal produced, .....	6,848,954
Number of tons used for steam at mines, .....	146,731
Number of tons sold to employes, .....	15,258
Number of persons employed inside the mines, .....	9,123
Number of persons employed outside the mines, .....	943
Total number of persons employed, .....	10,066
Number of fatal accidents, .....	18
Number of non-fatal accidents, .....	31

Number of tons of coal produced per fatal accident, . .	380,497
Number of tons produced per non-fatal accident, . . .	220,934
Number of persons employed per fatal accident, . . .	559
Number of persons employed per non-fatal accident, . .	324
Number of kegs of powder used, . . . . .	32,798
Number of pounds of dynamite used, . . . . .	61,130
Number of cylindrical boilers in use, . . . . .	22
Number of tubular boilers in use, . . . . .	110
Total horsepower of boilers, . . . . .	16,465
Number of electric dynamos, . . . . .	33
Number of electric motors, . . . . .	65
Number of air locomotives, . . . . .	3
Number of new mines opened, . . . . .	6
Tons of coal mined along Pennsylvania Railroad, . .	6,343,874
Tons mined along Baltimore and Ohio Railroad, . . .	505,107

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	Causes of Non-Fatal Accidents.							Occupations of Persons Injured.						Nationalities of Persons Injured.													
	Mine wagons.	Falls of coal.	Falls of rock.	Electric motor.	Hauling rope.	Gap.	Powder.	Total.	Miner.	Loader.	Driver.	Motorman.	Wreckmaster.	Total.	Americans.	Welsh.	Irish.	Scotch.	Poles.	Slavs.	Hungarians.	Italians.	Austrians.	Belgians.	French.	Total.	
January.	11	7	7	2	2	1	1	31	19	2	6	1	2	1	31	12	1	2	1	4	5	2	1	1	1	1	31
February.	1	1	1	1	1	1	1	8	4	2	1	1	1	9	2	1	1	1	1	2	1	1	1	1	1	13	
March.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
April.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
May.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
June.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
July.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
August.	1	1	2	1	1	1	1	9	1	2	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	13	
September.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
October.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
November.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	
December.	1	1	1	1	1	1	1	8	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	12	

Names of Collieries and Operators.	Kind of opening.	Seam of coal worked.	Haulage.	Pick or machine.	Motive power.	Type of machine.	Number used.	Coal mined by machines.	Coal mined by picks.
Barvind-White C. M. Co.									
Eureka No. 30, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	33	476,815	.....
Eureka No. 31, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Sullivan, .....	35	377,800	.....
Eureka No. 32, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	28	304,242	.....
Eureka No. 33, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	24	226,921	.....
Eureka No. 34, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	28	310,669	.....
Eureka No. 35, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	34	338,547	.....
Eureka No. 36, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	26	216,551	.....
Eureka No. 37, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	26	169,701	.....
Eureka No. 38, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	.....	.....	.....
Eureka No. 39, .....	Drift, .....	B or Miller, .....	Electric motors, .....	Machines, ...	Compressed air, .....	Ingersoll and Sullivan, .....	.....	.....	.....
Yellow Run shaft, .....	Shaft, .....	B or Miller, .....	Rope and mules, .....	Pick, .....	.....	Ingersoll and Sullivan, .....	.....	.....	193,064
Webster Coal and Coke Co.									
Webster No. 1, .....	Drift, .....	B or Miller, .....	Electric motor, .....	Pick, .....	.....	Sullivan, .....	.....	63,424	.....
Webster No. 2, .....	Slope, .....	B or Miller, .....	Rope and mules, .....	Machine, .....	Compressed air, .....	Sullivan, .....	8	57,820	.....
Webster No. 3, .....	Drift, .....	B or Miller, .....	Electric, .....	Pick and machine, .....	Compressed air, .....	Ingersoll and Sullivan, .....	4	6,000	150,121
Webster No. 5, .....	Slope, .....	B or Miller, .....	Rope and mules, .....	Pick and machine, .....	Compressed air, .....	.....	5	3,000	140,230
Webster No. 6, .....	Drift, .....	D or Mosha- non, .....	Electric motor, .....	Pick and machine, .....	Compressed air, .....	.....	6	8,000	42,712
Webster No. 8, .....	Drift, .....	D or Mosha- non, .....	Electric motor, .....	Pick and machine, .....	Compressed air, .....	.....	2	7,970	.....
Webster No. 15, .....	Shaft, .....	B or Miller, .....	Mules, .....	Pick, .....	.....	.....	.....	.....	21,448

Names of Collieries and Operators.	Kind of opening.	Steam of coal worked.	Haulage.	Pick or machine.	Motive power.	Type of machine.	Number used.	Coal mined by machines.	Coal mined by picks.
Puritan Coal Mining Co. Puritan No. 1. Puritan No. 2. Puritan No. 3.	Shaft, Drift, Slope,	B. or Miller, B. or Miller, B. or Miller,	Electric motor, Mules, Electric motor,	Pick, Pick, Pick,				167,812 15,300 44,276	
Carabaria Steel Co. Rolling Mill,	Drift,	C prime,	Rope and compressed air motor,	Machines,	Compressed air,	Ingersoll, Sergeant.	27	691,661	
Conemaugh slope,	Slope,	E or Lemon,	Rope and mules.	Pick,				131,737	
Franklin slope,	Slope,	B or Miller,	Endless chain,	Machine,		Ingersoll, Sergeant.	4	14,047	
Franklin slope No. 1. Franklin slope No. 2.	Drift, Drift,	C prime, C prime,	Mules, Mules,	Pick, Pick,				127,859	
W. H. Piper & Co. Sonman No. 1. Sonman No. 2. Sonman No. 3.	Drift, Drift, Slope,	B or Miller, B or Miller, B or Miller,	Rope and mules, Rope and mules, Rope and mules,	Pick, Pick, Machine,				34,126 102,651	
Sonman No. 4. Coulter & Huff. Argyle. Conemaugh. Kokomo.	Drift, Drift, Drift, Drift,	B or Miller, B or Miller, E or Lemon,	Mules, Rope and mules, Mules,	Machine, Machine, Machine,	Compressed air,	Ingersoll, Sergeant.	2	10,000	24,36
George Pierce & Sons. Catwell. Excelsior.	Drift, Drift, Drift,	C prime, B or Miller, E or Lemon,	Mules, Rope and mules, Mules,	Pick, Pick, Machine,			177,213	41,794 7,722	8,500 6,975
A. J. Haws & Sons, Ltd. Haws shaft. Coopersdale.	Drift, Drift, Drift,	B or Miller, B or Miller, B or Miller,	Mules, Mules, Mules,	Pick, Pick, Pick,				35,000 8,980	





Names of Collieries and Operators.	Kind of opening.	Seam of coal worked.	Haulage.	Pick or machine.	Motive power.	Type of machine.	Number used.	Coal mined by machines.	Coal mined by picks.
Lloydell Coal Co.	Drift.	B or Miller.	Mules.	Pick.					45,705
Logan Coal Co.	Slope.	B or Miller.	Rope and mules.	Pick.					57,491
Lilly Coal Co.	Drift.	B or Miller.	Mules.	Pick.					63,906
Wilson Creek Coal Co.	Drift.	A or 6 foot.	Mules.	Pick.					39,251
Llewellyn & Yeagley.	Drift.	C prime.	Mules.	Pick.					5,890
Moshannon Coal Co.	Slope.	E or Lemon.	Rope and mules.	Pick.					16,797
Murdock Brothers.	Shaft.	A or 6 foot.	Mules.	Pick.					5,223
Reading Coal and Iron Co.	Slope.	C prime.	Electric motor.	Machines.	Compressed air.	Harrison	12	61,087	
Mostoller No. 1.	Slope.	D or Moshannon.	Electric motor.	Machine.					
Penn. Bit. Coal Co.	Slope.	B or Miller.	Rope and mules.	Pick.					49,759
Priscilla Coal Co.	Drift.	B or Miller.	Mule.	Pick.					23,849
J. W. Metzger.	Drift.	E or Lemon.	Mule.	Pick.					18,258

Stinemah Brothers.	Slope & drift.	B or Miller,	Rope & electric motor.	Pick.			
Stinemah No. 1.							280,816
Stinemah Coal Co.	Drift.	B or Miller,	Electric motor, ..	Pick.			170,852
Stinemah No. 2.							
South Fork Coal Co.	Slope.	B or Miller,	Mules.	Pick.			133,000
Standard Coal Co., Ltd.	Drift.	B or Miller,	Mules.	Pick.			44,496
Standard.							
Steward Coal Mining Co.	Drift.	B or Miller,	Electric motor.	Machines.	Compressed air.	22,439	
Steward.							
Robinson & Irwin.	Drift.	B or Miller,	Mules.	Pick.			23,220
St. Clair.							
Shamrock Coal Co.	Drift.	B or Miller,	Mules.	Machines.	Compressed air.	10,000	5,000
Shamrock.							
Shoemaker Coal Co.	Drift.	E or Lemon,	Mules.	Pick.			17,688
Sonman drift.							
Wells Creek Coal Co.	Drift.	C prime, ..	Mules.	Pick.			40,200
Wells Creek.							
Sonman Shaft Coal Co.	Shaft.	B or Miller,	Electric motor, ..	Pick.			53,871
Sonman shaft No. 2.							
Somerset Mining Co.	Drift.	B or Miller,	Mules.	Pick.			2,573
Lewis.							
Henrietta Coal Mining Co.							180,221
Henrietta shaft Nos. 1 and 2.							
				Total.		3,383,619	3,465,335











Names of Those to Whom Certificates of Qualification Were Granted in the Sixth Bituminous District for the Following Years.

1893, F. G. Harvey, .....	First grade.	1893, Walter Ellis, .....	Second grade.
1893, Eleazer Higgins, .....	First grade.	1893, Dan'l Mulholland, .....	Second grade.
1893, James Highams, .....	First grade.	1893, Wm. Leadbeater, .....	Second grade.
1893, Joseph Easton, .....	First grade.	1893, Chas. Autey, .....	Second grade.
1893, Robt. Gilmore, .....	First grade.	1893, James Bowers, .....	Second grade.
1893, L. M. Walker, .....	First grade.	1893, J. W. Cole, .....	Second grade.
1893, Thos. Williams, .....	First grade.	1893, Arthur Camaval, .....	Second grade.
1893, John Reed, .....	First grade.	1893, Evan D. Davis, .....	Second grade.
1893, David T. Edwards, .....	First grade.	1893, Timothy Harding, .....	Second grade.
1893, Chas. Croker, .....	First grade.	1893, James Logan, .....	Second grade.
1893, L. V. Shoff, .....	Second grade.	1893, David Watkins, .....	Second grade.
1893, John Good, .....	Second grade.	1893, Wm. Stubbs, .....	Second grade.
1893, Andrew Lees, .....	Second grade.	1900, Adolph Cook, .....	First grade.
1893, Jos. Appleyard, .....	Second grade.	1900, Robert Virgin, .....	First grade.
1893, John Hunter, .....	Second grade.	1900, James Robertson, .....	First grade.
1893, Wm. F. Moss, .....	Second grade.	1900, James Forsyth, .....	Second grade.
1893, Alfred Slater, .....	Second grade.	1900, Jonathan Nicholson, .....	Second grade.
1893, Wm. Hahn, .....	Second grade.	1900, Jonathan Andrews, .....	Second grade.
1893, Wm. Dick, .....	Second grade.	1900, J. W. Ross, .....	Second grade.
1893, Thos. Forsyth, .....	Second grade.	1900, W. H. Blackburn, .....	Second grade.
1893, K. Anthony, .....	Second grade.	1901, Peter Welsh, .....	First grade.
1893, James Nelson, .....	Second grade.	1901, Talmage Bloss, .....	First grade.
1893, Henry Gage, .....	Second grade.	1901, Daniel McMulchen, .....	First grade.
1893, John Thomas, .....	Second grade.	1901, James Callaghan, .....	First grade.
1893, James Nicholson, .....	Second grade.	1901, W. J. Eustis, .....	First grade.
1893, James Campbell, .....	Second grade.	1901, John Retalick, .....	First grade.
1893, Sam'l Brewer, .....	Second grade.	1901, John W. Harrison, .....	First grade.
1893, Edward Nicholson, .....	Second grade.	1901, Wm. Benson, .....	First grade.
1893, George Blewitt, .....	Second grade.	1901, Geo. T. Robinson, .....	First grade.
1893, Geo. Simmons, .....	Second grade.	1901, Wm. Marron, .....	Second grade.
1893, Robt. Pierce, .....	Second grade.	1901, John Godfrey, .....	Second grade.
1893, Edward Kelley, .....	Second grade.	1901, Wm. Doubt, .....	Second grade.
1893, Elijah Brubaker, .....	Second grade.	1901, John Brown, .....	Second grade.
1893, Wm. Oldfield, .....	Second grade.	1901, Chas. Jones, .....	Second grade.
1893, R. F. Nichols, .....	Second grade.	1901, Chas. Maher, .....	Second grade.
1893, R. T. Pratt, .....	Second grade.	1901, Thos. J. Pierce, .....	Second grade.
1893, Alex. McDowell, .....	Second grade.	1901, John Jones, .....	Second grade.
1893, Edward McColville, .....	Second grade.	1901, John Lloyd, .....	Second grade.
1893, Daniel Dempsey, .....	Second grade.	1901, John McCormick, .....	Second grade.
1893, Sydney Clemence, .....	Second grade.	1901, John Evans, .....	Second grade.
1893, Smith Hawxley, .....	Second grade.	1901, James Keenan, .....	Second grade.
1893, Robt. McCann, .....	Second grade.	1901, Wm. Morgan, .....	Second grade.
18 3, W. E. Schwartzendrover, .....	Second grade.	1901, James Appleyard, .....	Second grade.
1893, Chas. Davis, .....	Second grade.		

### Accidents.

The number of fatal accidents was reduced last year between one and two per cent. from the number of the year before, and the reduction would have been much greater had it not been for the unusual number of mishaps due, directly or indirectly, to mining machinery. It was hoped that this class of accidents would decrease as the employes become better acquainted with the machines, but it is found that most of those fatally injured in this manner, were new men, who lacked the experience which should teach them where to look for and how to guard against the perils of their occupation. Three were Austrians, two Poles, one a Norwegian, and one a Slav, these constituting thirty-eight per cent of the deaths caused by machinery. Of the eighteen fatal accidents, over fifty per cent. could have been averted by the exercise of ordinary care and good judgment, even in the absence of full experience and knowledge of danger.

I feel that too much credit cannot be given to the mine foremen and superintendents for the efforts they have put forth to reduce the number of accidents in and about the collieries in their charge. It cannot be denied that their task has been rendered more difficult by modern methods of mining, in which machinery plays so large a part, and by the constant accession of new men to the forces under

their charge who are almost, if not totally ignorant of the dangers in coal mines. Much assistance can be rendered the officials in preventing accidents. .on the one hand by the operators, in safeguarding to a still greater degree the mechanical appliances, and on the other by the employes, in exercising care when working about these appliances, and in every department of their hazardous occupation.

### General Condition of Mines.

The sanitary condition of the mines throughout the district is fairly good. Efforts have been made to put in good ventilating apparatus, and the table in this report shows that a much larger volume of air is forced into the mines than is required by law. This, however, is in many cases no assurance that the operations are well ventilated, as I find that the greatest difficulty is in getting the air properly distributed and conducted to the face of the workings. If that part of the work were always well attended to, the total volume might be considerably less, while the condition of the mines would be better as to healthfulness. The chief trouble in the distribution of air is due to small airways and poorly made stoppings along the main roadways. These are often made of slate walls, packed between with dirt from the roads, or boarded up, in the belief that they will prevent the leakage of air, but this is a mistake, as such stoppings are not sufficient, particularly where fans are used. Nothing else than a brick, stone or slate stopping, well mortared, will prevent leakage between intake and return airways. Mines where the coal seams are low, as they are in this district, require to be equipped with fans that can throw off air against pressures ranging from one to three inches of water gauge, depending upon the size and the area over which the mine is worked; for low seams mean small airways, except at a heavy expense in blowing down roof. A little foresight in many cases would prevent this outlay, and increase the area of the air channels without any additional expense, by having at least the first two rooms on each cross heading, which is usually driven parallel with the main heading and airway, kept open in reserve for future use for the passage of air when the mine becomes extensive. This would give an area from three to four times the original size which would reduce the friction and thus enable the ventilators to throw off a larger volume of air, as the pressure would be less at the fan.

The distribution of air and the conducting of it in sufficient volume to the face of the working, lies mostly in charge of the mine foreman. To accomplish this, he should have air-tight stoppings put in, as has already been suggested, especially along the main air-ways between intake and return, and if this is done as the work advances, it is not expensive. But if poor stoppings are put in they answer fairly well



for a little time, but as the mine becomes extensive and it is found there is not sufficient air at the face of the working, then comes the real expense. All the old stoppings must be replaced by brick or stone, laid in mortar. Costly as this is, I have been compelled to have it done in several mines, and there are others where the same course must be followed, as the volume of air reaching the face of the workings is not adequate, especially when it has to be divided into two or more splits, each requiring a certain velocity before it will carry away the foul gasses given off at the face of the working, and replace it with pure air.

Though a number of good ventilators are being put in throughout the district, yet the trouble in some of the old mines has not been overcome, and it not difficult to see why. They have but a single channel, and generally a small one to carry the total volume of air into the mine. This may be a mile or more in length, and if at its termination the mine branches out into two or three sections of work, possibly larger than the original, it will require more air, and consequently greater pressure, than was the case at first. It is apparent that in such a case the best of fans cannot give relief. Considering the question of cost, the most practicable remedy in such a situation is to sink a shaft at or near the face of the mine if the depth is not too great, as the expense of enlarging an old airway for a mile or more and keeping up the stoppings along it would be enormous. This has been found necessary in several of the mines, and a few more will be required to apply the same remedy—reducing by half, the distance which the air has to travel, by sinking a shaft at the face of the working and providing a double airway into or out of the mine.

### Haulage and Drainage.

The question of haulage is now properly receiving a great deal of attention from the mine operators of the district, and the result, is the driving of large, roomy headings, the laying of good roads, and better drainage of the same, all of which are desirable from the viewpoint of economy, as well as that of safety. No mine is safe with small, narrow headings and roads; neither does it pay to have them, calculating by dollars and cents. This view of the subject is more general than ever before, and wherever it has been carried into effect I find little water or mud on the haulways in the mines, but dry and well-ballasted roads, with a generous space on each side of the track over which the coal must be hauled, whether by mule or mechanical power.

It must not be understood, of course, that everybody has been converted. The surprising tenacity with which people will cling to an

antiquated method of doing things, is illustrated by the way some mining men still drive headings over which coal has to be drawn out. For the sixteen years that the present Inspector has served in this district he has been steadily hammering away in an attempt to show the benefit to be derived from large headings, both for ventilation and the economical hauling of coal. Nevertheless there are those who cannot or will not be convinced, but continue with the small, low headings, at the expense of poor ventilation, increased danger to drivers, and less coal hauled for the same cost. It is purely a case of saving at the spigot and wasting at the bung, as a few moments of calculation will show. A heading that is contracted, particularly in height, allows the use of only a small mule, which quite naturally can haul only a small load, although it costs just as much to hire a man to drive him as to hire a driver for a heavier animal that could haul at least half as much more. Computation will show that at the lowest estimate there is a saving of five-tenths of a cent per ton on coal hauled through a large, roomy heading, as compared with that taken out along a heading that is small and low; to say nothing of the numerous other advantages gained. Such being the case, it seems strange that there should be any necessity for complaining of this particular defect. But, as before remarked, the signs are encouraging. The up-to-date men, who are fast taking the places of the fogies in this, as in every other department of the world's activities, are quick to note which is the better way, and just as prompt to adopt it.

There can be no change made that will so greatly aid in reducing the number of accidents as the one here referred to, and its influence in improving the ventilation is equally apparent. In a roomy heading the wagons do not fill such a large proportion of the space and so retard the passage of the air, as in a small one. Better drainage is another result of the wider passage way, which give sufficient space to carry the water off the middle of the road and conduct it alongside the tracks, and altogether off the hauling road. The latter plan, of course, is the better one, and it is being adopted at most of the mines, thus enabling me to report improved drainage throughout the district.

### Report on Mines by Groups.

The Sixth District now has about eighty mines, located as follows:

Seventeen are on the Somerset and Cambria branch of the Baltimore and Ohio Railroad, between Johnstown and Rockwood. The sanitary condition of all these mines is good. Eleven are ventilated by fans; the remaining six by furnaces, which are adequate for the



work, as they are small operations. The largest is the Federal, located at Hooversville, and very favorably situated for furnace ventilation, as it runs along the side of a bluff and can open up to the surface without any expense, thus bringing the air into the mine at the face of the workings. The operators propose to put in a fan in the spring. Three other mines are being opened up on this road, one by the Reading Coal and Iron Company at Friedens, and the other two by the Merchants' Coal Company near Jenners, Somerset county. The new town of Boswell is located at these latter mines, and is being rapidly built up. This promises to be a very large operation. The mines are opened by driving a slope down on the pitch of the seam. Several headings are already cut through, the coal being stocked outside ready for shipment as soon as the branch railroad to the mine is completed. The distance from the main line of the Baltimore and Ohio is thirteen miles.

Ten mines are located in and about Johnstown, some of them are small, but all are well ventilated and drained, and consequently are in good sanitary condition. Five are operated by the Cambria Steel Company, all of which are equipped with the best kind of ventilators. The safety of the mines at this point can be judged by the fact that over 1,000,000 tons of coal were produced during 1901, and but one fatal accident occurred, that being in the Rolling Mill mine, the largest single operation in the district, which produced over 601,000 tons during the year.

Of the thirty-five mines scattered along the main line of the Pennsylvania Railroad between Johnstown and Cresson, the first, going eastward, is the Black Diamond, located at Mineral Point. It is a small operation, employing about thirty-eight men, but is well ventilated by a fan, and the air is evenly distributed.

The next group of mines includes those at South Fork and Ehrenfeld, all but three of which are ventilated by fans, the Priscilla, and Webster Nos. 6 and 8, but the latter two will be equipped with them in the spring. The South Fork colliery has had a fan twelve feet in diameter, replaced by a twenty-foot one, which has put this mine in very satisfactory condition as regards ventilation. Stineman Nos. 1 and 2 are in need of better ventilating power. Both are supplied by fans, the latter by two small ones, the other by a single one, which is inadequate for the work, as this is in fact a double mine and covers a very large area. There is consequently required here for proper ventilation either a larger fan or an opening at the face of the workings. The two small fans at No. 2 should also be replaced by a large one in order to keep the mines in a healthful condition.

At Puritan, on a branch road from Portage, are located twelve collieries, several of them being small operations, four of which were idle the greater part of the past year. The remaining eight were

worked more or less steadily during that time. All but two are ventilated by fans, and furnaces suffice to air those two fairly well, as neither employs over thirty-five men. The Portage slope has been somewhat defective in its ventilation for the double reason that the fan was too small for the work, and its efficiency was partly destroyed by a line of steam and water pipes carried through the return airway. Both causes have now been removed, the pipes having been taken out and a larger fan put in. At Puritan No. 1, one of the most extensive mines located here, a large fan was put in to replace a smaller one, but still this did not sufficiently increase the ventilation, because of the small airway from the fan to the face of the workings. This was remedied by cutting a new and larger airway about one mile long, and the ventilation is now quite satisfactory.

The next group of mines is at Sonman and Bens Creek. At the former place are Sonman shaft No. 2 and Sonman drift. At the latter a 15-foot fan is being installed to replace a furnace; the former is now ventilated by a 15-foot fan, which gives excellent results. On Bens Creek there are six mines, all ventilated by furnaces except one small operation. The fan at Webster No. 1 is inadequate for the work, and to assist it, a shaft is to be put down at the extreme face of the mine, which will overcome the trouble and put the colliery in excellent condition. The other mines here are in good condition; two of them will be about worked out during 1902. At a mine between Bens Creek and Lilly, operated by the Moshannon Coal Company, a partially successful attempt has been made to ventilate with the heat from the steam line running down to the pumps. This plan works fairly well in extremely cold weather, but when that is over, its efficacy is gone and a fan will be installed at this mine in the spring.

At Lilly there are six mines, three of which are ventilated by fans and three by furnaces, and, the latter being comparatively small, this method gives fairly good results when the furnaces are kept properly fired up. At one of the three ventilated by fans it has been found necessary to put down a shaft at the face of the workings in order to get air to that point. The other two are in about the same condition, needing more ventilating power than is in the present fan, as the mines are becoming extensive and cover a large area.

The other mines in the district are located on the South Fork branch. Four are at Lloydell, all ventilated by fans except the Lloydell mine, which has a furnace, a very large one, however, and one which will give all the air required if kept properly fired up. The sanitary condition of all these collieries is quite satisfactory. At Dunlo there are four operations, the sanitary condition of all being good, with fan ventilation in each. At the Henrietta colliery a new fan twenty feet in diameter has been installed over a shaft which has been sunk to the face of the slope. The other mines on this

branch are located at Windber and Foustwell. All of these are opened up and operated on the same plan with double tracks all through the main headings, and ventilated on the split system, giving fresh air for each heading. All but one are equipped with Capell fans ranging from twelve to sixteen feet in diameter. The ventilation and drainage are very satisfactory.

TABLE I—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Sixth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Berwind White C. M. Co.						
Eureka No. 20.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 21.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 22.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 23.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 24.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 25.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 26.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 27.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 28.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Eureka No. 29.	Somerset.	Thos. Fischer.	Philadelphia.	J. S. Cunningham.	Windber.	Penna. Railroad.
Yellow Run shaft.	Cambria.	Thos. Fischer.	Philadelphia.	A. S. R. Richards.	Ossoda Mills.	Penna. Railroad.
Webster Coal and Coke Co.						
Webster No. 1.	Cambria.	John H. Tonkin.	Gallitzin.	Jas. L. Nicholson.	Ehrenfeld.	Penna. Railroad.
Webster No. 2.	Cambria.	John H. Tonkin.	Gallitzin.	Jas. L. Nicholson.	Gallitzin.	Penna. Railroad.
Webster No. 3.	Cambria.	John H. Tonkin.	Gallitzin.	Jas. L. Nicholson.	Gallitzin.	Penna. Railroad.
Webster No. 4.	Cambria.	John H. Tonkin.	Gallitzin.	Wm. C. Shiffer.	Gallitzin.	Penna. Railroad.
Webster No. 5.	Cambria.	John H. Tonkin.	Gallitzin.	Wm. C. Shiffer.	Gallitzin.	Penna. Railroad.
Puritan Coal Mining Co.						
Puritan No. 1.	Cambria.	Puritan.	Puritan.	P. F. Campbell.	Puritan.	Penna. Railroad.
Puritan No. 2.	Cambria.	Puritan.	Puritan.	P. F. Campbell.	Puritan.	Penna. Railroad.
Puritan No. 3.	Cambria.	Puritan.	Puritan.	P. F. Campbell.	Puritan.	Penna. Railroad.
Cambria Steel Co.						
Rolling Mill.	Cambria.	M. G. Moore.	Johnstown.	G. F. Robinson.	Johnstown.	Penna. Railroad.
Cunningham slope.	Cambria.	M. G. Moore.	Johnstown.	G. F. Robinson.	Johnstown.	Penna. Railroad.
Franklin slope.	Cambria.	M. G. Moore.	Johnstown.	G. F. Robinson.	Johnstown.	Penna. Railroad.
Franklin No. 1.	Cambria.	M. G. Moore.	Johnstown.	G. F. Robinson.	Johnstown.	Penna. Railroad.
Franklin No. 2.	Cambria.	M. G. Moore.	Johnstown.	G. F. Robinson.	Johnstown.	Penna. Railroad.
W. H. Poyer & Co.						
Sonman No. 1.	Cambria.	A. H. Slayman.	Altoona.	Geo. Forsyth.	Lily.	Penna. Railroad.
Sonman No. 2.	Cambria.	A. H. Slayman.	Altoona.	Geo. Forsyth.	Lily.	Penna. Railroad.
Sonman No. 3.	Cambria.	A. H. Slayman.	Altoona.	Geo. Forsyth.	Lily.	Penna. Railroad.
Sonman No. 4.	Cambria.	A. H. Slayman.	Altoona.	Geo. Forsyth.	Lily.	Penna. Railroad.



TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Coulter & Huff						
Argyle, .....	Cambria, ..	J. P. Wilson, .....	South Fork, .....	J. P. Wilson, .....	South Fork, .....	Penna. Railroad.
Conemaugh, .....	Cambria, ..	J. P. Wilson, .....	South Fork, .....	J. P. Wilson, .....	South Fork, .....	Penna. Railroad.
Kukono, .....	Cambria, ..	J. P. Wilson, .....	South Fork, .....	J. P. Wilson, .....	South Fork, .....	Penna. Railroad.
George Pierce & Sons,						
Calwell, .....	Cambria, ..	.....	.....	Robt. Pierce, .....	Puritan, .....	Penna. Railroad.
Excelsior, .....	Cambria, ..	.....	.....	Robt. Pierce, .....	Puritan, .....	Penna. Railroad.
A. J. Haws & Sons, Ltd.						
Haws shaft, .....	Cambria, ..	Wm. Oppy, .....	Johnstown, .....	Wm. Oppy, .....	Johnstown, .....	Penna. Railroad.
Coopersdale, .....	Cambria, ..	.....	Johnstown, .....	Wm. Oppy, .....	Johnstown, .....	Penna. Railroad.
Loyal Hanna Coal & Coke Co.						
Sonnen shaft No. 1, .....	Cambria, ..	.....	.....	J. L. S. Patterson, .....	Onnalinda, .....	Penna. Railroad.
Loyal Hanna No. 3, .....	Cambria, ..	.....	.....	J. L. S. Patterson, .....	Onnalinda, .....	Penna. Railroad.
Henrietta Coal Mining Co.						
Henrietta shaft No. 1, .....	Cambria, ..	.....	.....	Jas. Campbell, .....	Dunlo, .....	Penna. Railroad.
Henrietta shaft No. 2, .....	Cambria, ..	.....	.....	Jas. Campbell, .....	Dunlo, .....	Penna. Railroad.
A. F. Clark & Co.						
Stony Creek, .....	Somerset, ..	.....	.....	.....	Hooversville, ..	B. & O.
Somerset, .....	Somerset, ..	.....	.....	.....	Hooversville, ..	B. & O.
Madeira Coal Co.						
Madeira No. 1, .....	Cambria, ..	T. G. Betts, .....	Clearfield, .....	.....	.....	Penna. Railroad.
Madeira No. 2, .....	Cambria, ..	T. G. Betts, .....	Clearfield, .....	.....	.....	Penna. Railroad.
Madeira No. 3, .....	Cambria, ..	T. G. Betts, .....	Clearfield, .....	.....	.....	Penna. Railroad.
C. A. Buch.						
Alton, .....	Cambria, ..	C. A. Buch, .....	Altoona, .....	D. J. Mulhollen, ..	Lloydell, .....	Penna. Railroad.
S. Hamilton Coal Co.						
Adams, .....	Somerset, ..	A. C. Adams, .....	847 Baltimore, Md., .....	P. M. Connor, .....	Listie, .....	B. & O.
Cambria Coal Mining Co.						
Anchor, .....	Cambria, ..	Andy Earna, .....	Puritan, .....	Andy Earna, .....	Puritan, .....	Penna. Railroad.
D. Laughman and J. Leahy.						
Bear Rock, .....	Cambria, ..	.....	.....	Patrick Leahy, ....	Lilly, .....	Penna. Railroad.



Bando	Somerset	Thos. M. Righter,	Mt. Carmel,	G. W. Gehres,	Millred Station, E. & O.
Bethel	Somerset			A. G. White,	Hollsopple, .... B. & O.
M. Bracken Coal Co. Black Diamond,	Cambria,	J. H. Bracken,	Johnstown,		
D. Laughman Dysert,	Cambria,			Thos. Leahy,	Lilly, ..... Penna. Railroad.
Ferndale Coal Co. Ferndale,	Cambria,	Geo. K. Schryock,	Johnstown,		..... B. & O.
Whitney, Kenner & Holts. Federal,	Somerset,	Edw. W. Holt,	Hooversville,	E. W. Holt,	Hooversville, .. B. & O.
Baltzell Coal Co. Ivy Ridge,	Cambria,	Chas. Baltzell,	Altoona,	Jos. Higham,	Portage, ..... Penna. Railroad.
Lorain Steel Co. Ingleside,	Cambria,	P. Lavelle,	Johnstown,	Wm. T. Moss,	Wallasal, ..... B. & O.
Merchants Coal Co. Jenner Nos. 1 & 2,	Somerset,	W. H. Morris,	Johnstown,	Emoch James,	Johnstown, .... B. & O.
Listie Mining & Manfg. Co. Krebs,	Somerset,	Geo. J. Krebs,	Somerset,	Geo. J. Krebs,	Somerset, ..... B. & O.
Lloydell Coal Co. Lloydell,	Cambria,	J. Chester Stauffer,	Harrison Building, Phila.,	W. H. Blackburn,	Lloydell, ..... Penna. Railroad.
Logan Coal Co. Logan slope,	Cambria,	C. F. Fraser,	Altoona,	Wm. H. Booth,	Dunlo, ..... Penna. Railroad.
Lilly Coal Co. Lilly slope,	Cambria,	Chas A. Hughes,	Altoona,	W. W. Evans,	Lilly, ..... Penna. Railroad.
Wilson Creek Coal Co. Lone Tree,	Somerset,			F. F. Lyon,	Rockwood, .... B. & O.
Llewellyn & Yeagly. Llewellyn,	Cambria,			D. J. Llewellyn,	Johnstown, .... B. & O. & P. R. R.
Moshannon Coal Co. Moshannon No. 2,	Cambria,	Thos. Leahy,	Lilly,	Thos. Leahy,	Lilly, ..... Penna. Railroad.
Murdoch Brothers. Milford shaft,	Somerset,	J. M. Murdoch,	Johnstown,	Angus Louther,	Somerset, ..... B. & O.
Reading Coal and Iron Co. Mosteller No. 1,	Somerset,	Geo. Schuhmann,	Reading,	W. H. Druse,	Kimmelton, ... B. & O.
Mosteller No. 2,	Somerset,				

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Penn. Bit. Coal Co.						
Portage slope, .....	Cambria, ...	W. L. Hughes, .....	Portage, .....	.....	.....	Penna. Railroad.
Priscilla Coal Co.						
Priscilla, .....	Cambria, ...	D. W. Luke, .....	South Fork, .....	J. H. Luke, .....	South Fork, ...	Penna. Railroad.
J. W. Menzer.						
Plain, .....	Cambria, ...	J. W. Menzer, .....	Holidaysburg, .....	John A. Leaf, ....	Lilly, .....	Penna. Railroad.
Stineman Brothers.						
Stineman No. 1, .....	Cambria, ...	W. I. Stineman, .....	South Fork, .....	R. H. Ott, .....	South Fork, ...	Penna. Railroad.
Stineman Coal Co.						
Stineman No. 2, .....	Cambria, ...	W. I. Stineman, .....	South Fork, .....	Jonathan Andrews, ..	South Fork, ...	Penna. Railroad.
South Fork Coal Co.						
South Fork, .....	Cambria, ...	Philip Hartman, .....	South Fork, .....	Jos. Callahan, .....	South Fork, ...	Penna. Railroad.
Standard Coal Co., Ltd.						
Standard, .....	Cambria, ...	R. J. Hughes, .....	Altoona, .....	N. Evans, .....	Lilly, .....	Penna. Railroad.
Stewart Coal Mining Co.						
Stewart, .....	Somerset, ..	J. C. Galbreath, .....	Landstreet, .....	.....	.....	.....
Robinson & Irwin.						
St. Clair, .....	Cambria, ...	Robertson & Irwin, ....	Johnstown, .....	John Thomas, .....	Johnstown, ....	Penna. Railroad.
Shamrock Coal Co.						
Shamrock, .....	Somerset, ..	.....	.....	F. H. Darby, .....	Shamrock, .....	B. & O.
Shoemaker Coal Co.						
Sonman drift, .....	Cambria, ...	J. C. Shoemaker, .....	Sonman, .....	Hawey Mears, ....	Portage, .....	Penna. Railroad.
Sonman Shaft Coal Co.						
Sonman shaft No. 2, .....	Cambria, ...	.....	.....	H. S. Beale, .....	Sonman, .....	Penna. Railroad.
Wells Creek Coal Co.						
Wells Creek, .....	Somerset, ..	Fred. C. Keighley, .....	Uniontown, .....	John H. Lane, ....	Friendsps, .....	B. & O.
Somerset Mining Co.						
Lewis mine, .....	Somerset, ..	.....	.....	Talfred Lewis, ....	Hooversville, ..	B. & O.

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Sixth Bituminous District for the Year ending December 31, 1901.

Names of Operators.		County.																									
Shipments of coal in tons by rail or otherwise.				Number of tons used for steam and heat at colliery.		Sold to local trade and used by employees—tons.		Total production of coal in tons.		Total production of coke in tons.		Number of coke ovens.		Number days worked.		Number persons employed.		Number fatal accidents.		Number non-fatal accidents.		Number kegs powder used.		Number pounds of dynamite used.		Number horses and mules.	
Berwind White C. M. Co.				Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.		Somerset.	
Berwind No. 30.	.....	466,125	.....	10,633	.....	36	.....	476,815	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 31.	.....	371,481	.....	6,319	.....	.....	.....	377,800	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 32.	.....	294,318	.....	9,885	.....	39	.....	304,242	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 33.	.....	294,318	.....	9,885	.....	39	.....	304,242	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 34.	.....	294,318	.....	9,885	.....	39	.....	304,242	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 35.	.....	304,351	.....	6,315	.....	.....	.....	310,669	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 36.	.....	377,818	.....	6,315	.....	.....	.....	388,547	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 37.	.....	212,758	.....	3,833	.....	.....	.....	216,591	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 38.	.....	165,311	.....	4,390	.....	.....	.....	169,701	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka No. 39.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yellow Run shaft.	.....	186,295	.....	5,595	.....	1,174	.....	193,064	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.				63,135	.....	2,110	.....	2,664,350	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster Coal and Coke Co.				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 1.	.....	62,254 03	.....	.....	.....	.....	.....	62,434 03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 2.	.....	55,822 15	.....	2,017	.....	200	.....	57,839 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 3.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 4.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 5.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 6.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 7.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 8.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 9.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 10.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 11.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 12.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 13.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 14.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Webster No. 15.	.....	136,121 12	.....	.....	.....	.....	.....	136,121 12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.				14,693	.....	1,340	.....	500,754 60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE II--Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees--tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Puritan Coal Mining Co.														
Puritan No. 1.	Cambria,	105,222	2,880	200	107,312	.....	.....	228	228	.....	1	626	.....	14
Puritan No. 2.	Cambria,	15,846	.....	.....	15,846	.....	.....	134	30	.....	.....	30	.....	5
Puritan No. 3.	Cambria,	43,371	543	362	44,276	.....	.....	181	68	.....	.....	180	.....	6
Total.		224,439	2,923	562	227,918	.....	.....	181	326	.....	1	900	.....	25
Cambria Steel Co.														
Rolling Mill.	Cambria,	588,574	13,076	11	601,651	.....	.....	230.50	657	1	4	2,720	7,980	77
Conemaugh slope.	Cambria,	129,889	1,801	7	131,737	.....	.....	267.50	137	1	.....	1,229	2,786	12
Franklin slope.	Cambria,	14,047	.....	.....	14,047	.....	.....	264	44	.....	.....	38	1,750	2
Franklin slope No. 1.	Cambria,	126,356	1,503	.....	127,859	.....	.....	264	152	.....	1	418	1,615	21
Franklin slope No. 2.	Cambria,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.		858,846	16,440	18	875,304	.....	.....	950	990	2	5	4,305	1,213	112
W. H. Piper & Co.														
Sonman No. 1.	Cambria,	32,826	900	900	34,126	.....	.....	163	64	1	.....	50	39	7
Sonman No. 2.	Cambria,	110,851	900	900	112,651	.....	.....	188	184	.....	.....	185	576	16
Sonman No. 3.	Cambria,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonman No. 4.	Cambria,	24,323	.....	8	24,326	.....	.....	176	44	.....	.....	40	.....	2
Total.		167,845	1,800	1,808	171,126	.....	.....	177	292	1	.....	275	600	25
Coulter & Huff.														
Arcyle.	Cambria,	175,422	1,095	676	177,213	.....	.....	310	189	.....	.....	1,687	1,550	15
Conemaugh.	Cambria,	40,549	586	659	41,794	.....	.....	291	56	.....	1	395	300	4
Kokomo.	Cambria,	7,722	.....	.....	7,722	.....	.....	132	15	1	.....	103	.....	2
Total.		223,733	1,681	1,335	226,729	.....	.....	241	254	1	1	2,185	1,850	21

George Pierce & Sons.		Cambria,	8,500	100	72	8,500	148	40	70	200	2
Caldwell,		Cambria,	6,802	100	72	6,802	197	12	60	200	2
Excessport,											
Total,			15,302	100	72	15,302	172	52	130	200	4
A. J. Haws & Sons, Ltd.		Cambria,		1,300		35,000	365	54	200	1,225	7
Haws shaft,		Cambria,		8,980		8,980		19	50		2
Coppersdale,											
Total,				10,280		43,980	365	73	250	1,225	9
Loyalhanna Coal and Coke Co.		Cambria,		4,855	255	119,119	192	210			20
Sonnan shaft No. 1,		Cambria,	144,020	96	47	13,491	183	73			9
Loyalhanna No. 2,											
Total,			177,377	4,951	302	132,630	178	289			29
Henrietta Coal Mining Co.		Cambria,		5,328	1,088	180,221	277	265	750	1,500	51
Henrietta shaft No. 1,		Cambria,	173,865								
Henrietta shaft No. 2,											
Total,			173,865	5,328	1,088	180,221	277	265	750	1,500	51
A. F. Clark & Co.		Somerset,		110		9,322	32	55			6
Stony Creek,		Somerset,	9,222	40		2,511	27	20			2
Somerset,			3,471								
Total,			12,693	150		12,833	40	75			8
Geo. B. Newton Co.		Cambria,			200	12,894	80	41	50		8
Hopewell No. 1,			12,694			3,333	43	15	15		1
Plane No. 2,			3,333								
Plane No. 3,											
Total,			16,027		200	16,227	62	56	65		9





Moshannon Coal Co.,	14,981	843	973	16,797	251	53	100	200	2
Murduck Brothers,	5,923	200	.....	5,223	251	35	40	.....	1
Reading Coal and Iron Co.,	59,288	1,958	441	61,687	257	152	534	7,150	11
Penn. Bit. Coal Co.,	48,000	1,500	250	49,750	128	121	240	100	9
Priscilla Coal Co.,	33,449	300	100	33,849	188	60	150	100	10
J. W. Metzger,	18,458	50	50	18,258	144	42	172	25	0
Stineman Brothers,	273,616	7,290	.....	280,816	351	7	1,800	.....	21
Stineman Coal Co.,	170,142	500	.....	170,362	293	5	1,600	.....	11
Cambria,	130,100	3,000	.....	133,100	273	269	1,600	1,000	13
Cambria,	44,090	.....	.....	44,196	294	73	30	700	9
Standard Coal Co. Limited,	19,863	2,415	161	22,421	249	57	500	.....	3
Cambria,	22,922	38	250	23,220	294	23	115	.....	2
Robinson Coal Co.,	13,500	1,500	.....	15,000	207	46	.....	250	4
Shamaker Coal Co.,	17,654	.....	34	17,688	91	71	25	.....	12
Wells Creek Coal Co.,	40,000	200	.....	40,200	203	75	150	.....	6
Sonnan Shaft Coal Co.,	50,461	2,456	952	53,871	130	125	1	.....	6
Somerset Mining Co.,	2,375	.....	.....	2,573	39	23	.....	.....	.....
Grand total,	6,656,965	146,731	15,258	6,848,954	188,50	10,006	32,798	61,130	691





TABLE III.—Showing the number of each class of employees at each colliery in the Sixth Bituminous District for the year 1901.

Names of Operators and Collieries.	County	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.	All other employees.	Total outside.		
Berwind White C. M. Co.																			
Eureka No. 20.	Somerset.	1		324	30	12	2	26	393	1		3	11	1	1	24	41	431	
Eureka No. 21.	Somerset.	1		265	60	13		30	401	1		1	5	1	1	18	31	432	
Eureka No. 22.	Somerset.	1		327	45	13		25	412	1		2	7	1	1	21	15	447	
Eureka No. 23.	Somerset.	1		219	10	8	1	16	256	1		2	5	1	1	14	24	289	
Eureka No. 24.	Somerset.	1		385	51	12		15	568	1		3	9	1	1	23	37	405	
Eureka No. 25.	Somerset.	1		354	74	12		21	449	1		1	2	1	1	20	31	471	
Eureka No. 26.	Somerset.	1		255	44	8		18	337	1		1	5	1	1	14	24	361	
Eureka No. 27.	Cambria.	1		115	30	7		18	230	1		2	5	1	1	13	23	253	
Eureka No. 28.	Somerset.	1																	
Eureka No. 29.	Somerset.	1		290	13	21	6	2	394			3	5		1	6	15	319	
Yellow Run shaft.	Cambria.	22	2,546	37	13	106	13	197	3,141	8	24	40	8		9	135	264	3,405	
Total.																			
Webster Coal and Coke Co.																			
Webster No. 1.	Cambria.	1		110		11	2	7	131						1	7	10	111	
Webster No. 2.	Cambria.	1		45	6	6	1	16	69							5	11	89	
Webster No. 3.	Cambria.	1		130	24	24	7	22	186			2	1						
Webster No. 4.	Cambria.	1	2	123	22	4		9	174	1	11	8	3		4	55	82	544	
Webster No. 5.	Cambria.	1		76		12	4		102										
Webster No. 6.	Cambria.	1		35		3		2	41			1			1	4	9	50	
Webster No. 7.	Cambria.	1																	
Webster No. 8.	Cambria.	1																	
Webster No. 9.	Cambria.	1																	
Webster No. 10.	Cambria.	1																	
Webster No. 11.	Cambria.	1																	
Webster No. 12.	Cambria.	1																	
Webster No. 13.	Cambria.	1																	
Webster No. 14.	Cambria.	1																	
Webster No. 15.	Cambria.	1																	
Total.																			
		6	4	519		78	18	78	703	1	15	15	4		6	71	112	815	



Puritan Coal Mining Co.	Puritan No. 1.	1	170		20	4	17	212		2	4				3	7	16	25
	Puritan No. 2.	1	22	Cambria,	4	2	2	28		1	2				3	2	9	30
	Puritan No. 3.	1	48	Cambria,	6			59									6	65
	Total.	3	241		30	6	20	299		3	6				8	10	27	226
	Cambria Steel Co.																	
Rolling Mill.	Rolling mill.	2	448		67	24	52	597		1	7	17	1		4	30	60	657
	Camden slope.	1	102	Cambria,	9			118		1	2	3			2	11	19	137
	Camden slope.	1	102	Cambria,	9			118		1	2	3			2	11	19	137
	Franklin No. 1.	1	109	Cambria,	12	4	9	133		2	3	4			1	3	7	44
	Franklin No. 2.	1	109	Cambria,	10			133		3	4				1	11	13	132
Total.	Total.	5	690		88	28	70	882		3	14	25	1		8	55	105	940
	W. H. Piper & Co.																	
Sonman No. 1.	Sonman No. 1.	1	48		7	2	2	60		2	2							64
	Sonman No. 2.	1	149	Cambria,	20	3		173		3	4				1	3	11	184
	Sonman No. 3.	1	40	Cambria,	2	1		44										44
	Sonman No. 4.	1	40	Cambria,	2	1		44										44
	Total.	3	237		29	6	2	277		5	6				1	3	15	292
Coulter & Huff.	Argyle.	1	150		2	9	2	164		1	3					1	18	25
	Camden.	1	177	Cambria,	1			43		1	1					3	7	50
	Kokomo.	1	12	Cambria,	2			15										15
	Total.	3	199		3	15	2	222		2	4				1	21	32	254
George Pierce & Sons.	George Pierce & Sons.																	
	Calwell.	1	30		2		1	34		1	1					4	6	49
	Excelsior.	1	8	Cambria,	1			10				1				1	2	12
	Total.	2	38		3		1	44		1	1	1				5	8	52
	A. J. Haws & Sons, Ltd.																	
Haws shaft.	Haws shaft.	1	37		4		3	45				1			1	7	9	54
	Cooperdale.	1	14		2			17							1	1	2	19
	Total.	2	51		6		3	62				1			2	8	11	73
	Loyalhanna Coal and Coke Co.																	
	Sonman shaft No. 1.	1	161		6			189		1	2	6	1		3	8	21	210
Loyalhanna, No. 3.	Loyalhanna, No. 3.	1	69	Cambria,	3	5		69		2	2	1	4		1	2	10	79
	Total.	2	221		9	19	7	258		1	4	7	5		4	10	31	289
	Henrietta Coal Mining Co.																	
	Henrietta shaft No. 1.	1	185		12	8	15	242		3	5				1	14	23	265
	Henrietta shaft No. 2.	1	185	Cambria,	12	8	15	242		3	5				1	14	23	265
	Total.	1	185		12	8	15	242		3	5				1	14	23	265

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.									
		Inside foremen or mine bosses.	Pit bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Washmen and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.	All other employees.	Total outside.	(Grand total inside and outside).			
A. F. Clark & Co. Stony Creek. Somerset.	Somerset. Somerset.	1 1	..... .....	33 19	2 2	5 2	2 .....	3 2	46 17	..... .....	2 .....	1 .....	..... .....	..... .....	1 .....	3 1	9 3	55 20			
Total.		2	.....	43	4	7	2	5	53	.....	2	3	.....	.....	3	4	12	75			
George B. Newton & Co. Hopfer, No. 1. Plane No. 2. Cambria.	Cambria. Cambria.	..... 1	..... .....	39 8	..... .....	4 1	1 .....	1 .....	36 10	..... .....	1 .....	..... .....	..... .....	..... .....	2 2	2 .....	5 5	41 15			
Total.		1	.....	38	.....	5	1	1	46	.....	2	.....	.....	.....	4	4	10	56			
Recapitulation.																					
Derwald White C. M. Co. Webster Coal and Coke Co. Puritan Coal Mining Co. Cambria Steel Co. W. H. Piper & Co. Coulter & Huff. Geo. Pierce & Sons. J. J. Haws & Sons.	Somerset. Cambria. Cambria. Cambria. Cambria. Cambria. Cambria. Cambria.	22 6 3 5 3 3 2 2	..... ..... ..... ..... ..... ..... ..... .....	2,545 4 240 690 237 199 38 51	357 ..... ..... ..... ..... 3 ..... .....	106 78 30 88 29 ..... ..... 6	13 18 6 28 6 ..... ..... .....	197 78 20 70 2 2 3 3	3,241 793 299 885 277 222 44 62	8 ..... ..... ..... ..... ..... ..... .....	24 15 3 11 2 2 1 .....	60 15 6 25 6 ..... ..... .....	..... ..... ..... ..... ..... ..... ..... .....	9 6 8 8 1 2 2 .....	155 71 10 55 3 15 24 5 8	264 112 27 105 15 32 32 11	3,507 815 336 990 292 254 52 73				

	2	221	9	19	7	153	1	4	7	5	19	31	183
Loyalhanna Coal and Coke Co.,	1	185	12	21	8	15	1	2	5	5	1	21	265
Henrietta Coal Mining Co.,	1	43	4	7	2	5	1	2	3	3	1	13	71
A. F. Clark & Co.,	1	38	2	7	2	1	1	2	3	3	2	10	36
Geo. B. Newton Co.,	1	30	2	7	2	6	1	2	1	1	2	5	107
C. A. Buch,	1	23		7	1	6	1	2	1	1	1	7	58
S. Hamilton Coal Co.,	1	40		6	2	1	1	1	1	1	1	3	30
Cambria Coal Mining Co.,	1	25		1	2	2	1	1	1	1	3	3	50
D. Laughtman and J. Leahy,	1	16		1	3	3	1	1	1	1	3	3	32
Bando Coal Co.,	1	38		1	3	3	1	1	1	1	1	3	28
Bethel Coal Co.,	1	80		20	2	2	1	1	1	1	16	21	47
M. Fracklen Coal Co.,	1	13		1	1	1	1	1	1	1	1	1	124
D. Laughtman,	1	65		1	1	1	1	1	1	1	1	1	17
Verdine Coal Co.,	1	23		1	1	1	1	1	1	1	1	1	2
Walsh & Kemmer & Hollis,	1	35		1	1	1	1	1	1	1	1	1	5
Balzell Coal Co.,	1	30		4	3	5	1	1	1	1	1	1	80
Lorain Steel Co.,	1	23		2	2	2	1	1	1	1	1	1	71
Merchants Coal Co.,	2	180	2	14	7	1	1	1	1	1	1	1	58
Listie Mining and Manfg. Co.,	1	67		8	2	2	1	1	1	1	1	1	11
Lloydell Coal Co.,	1	68	2	8	2	7	1	1	1	1	1	1	203
Logan Coal Co.,	1	137		10	3	2	1	1	1	1	1	1	56
Lilly Coal Co.,	1	42	1	2	1	2	1	1	1	1	1	1	94
Wilson Creek Coal Co.,	1	39		2	1	1	1	1	1	1	1	1	162
Llewellyn & Yeagley,	1	43		2	2	2	1	1	1	1	1	1	64
Cambria,	1	30		2	2	2	1	1	1	1	1	1	19
Moshannon Coal Co.,	1	25		2	2	2	1	1	1	1	1	1	53
Murdoch Brothers,	1	85	23	10	9	9	1	1	1	1	1	1	35
Reading Coal and Iron Co.,	1	100		9	9	9	1	1	1	1	1	1	24
Penn. Bit. Coal Co.,	1	54	1	4	4	4	1	1	1	1	1	1	121
Triadelphia Coal Co.,	1	30	2	4	1	1	1	1	1	1	1	1	66
T. W. M. Porter,	1	339	9	29	3	3	1	1	1	1	1	1	42
Stineman Brothers,	2	218	5	18	5	5	1	1	1	1	1	1	409
Cambria,	1	175		13	5	3	1	1	1	1	1	1	27
Cambria,	1	60		5	1	1	1	1	1	1	1	1	15
South Fork Coal Co.,	1	37	1	2	1	1	1	1	1	1	1	1	212
Standard Coal Co., Ltd.,	1	18	2	2	1	5	1	1	1	1	1	1	13
Steward Coal Mining Co.,	1	30	2	2	1	5	1	1	1	1	1	1	17
Robinson & Irwin,	1	58		4	4	4	1	1	1	1	1	1	48
Shamrock Coal Co.,	1	80		10	2	5	1	1	1	1	1	1	71
Shoemaker Coal Co.,	1	190		1	1	1	1	1	1	1	1	1	75
Wells Creek Coal Co.,	1	19		10	2	5	1	1	1	1	1	1	125
Sonman shaft Coal Co.,	1			1	1	1	1	1	1	1	1	1	23
Somerset Mining Co.,	1												
Grand total.	90	7,346	436	638	132	473	27	120	171	28	96	943	10,066

TABLE III Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												T. tal.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Berwind White Coal Mining Co.,	Somerset,	20	17	19	18	20	18	17	20	19	19	17	18	222
Webster Coal and Coke Co.,	Cambria,	24	21	23	16	16	17	16	18	22	22	19	19	24
Puritan Coal Mining Co.,	Cambria,	19	17	21	16	16	13	13	10	17	14	12	10	17
Cambria Steel Co.,	Cambria,	24	24	24	24	25	23	23	25	24	24	21	20	281
W. H. Piper & Co.,	Cambria,	19	15	17	15	15	11	12	12	11	13	15	15	152
Coulter & Huff,	Cambria,	26	19	24	21	20	17	17	19	19	21	19	19	241
Geo. Pierce & Sons,	Cambria,	17	15	20	16	12	12	12	8	15	18	17	22	184
A. J. Haws & Sons,	Cambria,	26	23	25	25	27	24	16	27	25	26	18	26	304
Loyalhanna Coal and Coke Co.,	Cambria,	21	18	17	14	15	12	12	11	23	17	16	23	269
Henrietta Coal Mining Co.,	Cambria,	22	17	25	25	25	15	22	25	13	8	13	29	272
G. F. Clark & Co.,	Cambria,	9	6	13	6	6	4	2	2	13	4	14	13	47
Geo. B. Lawton Co.,	Cambria,	18	9	10	20	19	10	20	12	16	21	17	19	200
C. A. Bach,	Cambria,	23	23	20	26	21	22	25	18	23	25	21	23	271
S. Hamilton Coal Co.,	Somerset,	14	11	11	9	10	1	10	8	9	13	13	16	125
Cambria Coal Mining Co.,	Cambria,	20	18	22	21	16	18	20	18	18	24	23	22	240
D. Laughman and J. Leahy,	Cambria,	20	21	12	16	12	7	18	20	24	25	26	24	201
Bando Coal Co.,	Somerset,	20	25	28	27	26	25	7	26	25	25	23	24	308
Bethel Coal Co.,	Somerset,	14	11	18	19	14	9	11	9	11	12	17	22	174
M. Bracken Coal Co.,	Cambria,	24	13	22	23	20	18	20	15	12	11	20	23	221
D. Laughman,	Cambria,	10	10	20	20	22	22	20	10	10	10	9	10	65
Perdiate Coal Co.,	Somerset,	10	6	18	15	13	10	14	14	3	13	13	18	113
Whitney, Kemmer & Holts,	Cambria,	15	11	11	10	9	11	3	3	12	13	15	15	158
Batzell Coal Co.,	Cambria,	15	11	11	10	10	10	14	14	12	12	12	12	175
Lorain Steel Co.,	Cambria,	22	8	12	32	11	11	15	21	23	24	17	19	204
Merchants Coal Co.,	Somerset,	22	10	21	20	16	12	18	22	20	23	19	20	234
Justice Mining and Man'g. Co.,	Cambria,	22	20	24	23	15	11	11	8	6	15	14	15	246
Loyalhanna Coal Co.,	Cambria,	23	13	18	21	19	11	11	11	22	22	19	21	172
Lilly Coal Co.,	Cambria,	25	17	25	24	13	10	16	14	12	22	22	24	240
Wilson Creek Coal Co.,	Somerset,	15	15	22	22	19	18	9	12	13	22	22	23	172
Llewellyn & Yeagley,	Cambria,	24	18	25	22	19	14	16	24	22	25	20	25	251
Moshannon Coal Co.,	Cambria,	18	18	16	14	14	25	23	25	21	26	20	20	100
Murdock Brothers,	Somerset,	22	22	25	25	25	25	23	25	21	26	20	20	287
Reading Coal and Iron Co.,	Somerset,	26	22	25	25	25	25	23	25	21	26	20	24	287





TABLE IV.—List of fatal accidents that occurred in and about the mines of the Sixth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 4	Mike Barron, .....	Austrian, ....	Loader, .....	36	M.	1	2	Eureka No. 35, ....	Somerset,	Was badly crushed; he was sitting in his room and the empty cars being pushed by motor caught him between cars and rib.
22	John Marstig, .....	Slav, .....	Miner, .....	20	S.	.....	.....	Sonman No. 1, .....	Cambria, ..	Killed by a fall of coal after having been notified not to go under it by the foreman.
25	Joseph Clemens, .....	Pole, .....	Miner, .....	22	S.	.....	.....	Bethel, .....	Somerset,	Fatally injured by a fall of coal; he had put a shaver which did not bring it down, so he lay down to undermine further, when it fell on him.
Feb. 16	Andy Hershstock, .....	Austrian, ....	Loader, .....	32	M.	1	1	Eureka No. 35, ....	Somerset,	Was running a coal car out of the room and struck his head against trolley wire.
March 11	Silas Yingling, .....	American, ...	Miner, .....	38	M.	1	6	Kokomo, .....	Cambria, ..	Killed by a fall of rock; it was a pot hole or horseback; was unavoidable.
20	Zachariah Stayne, .....	American, ...	Miner, .....	23	S.	.....	.....	Lloydell, .....	Cambria, ..	Was injured by a fall of roof. Place was well propped, but roof was very bad.
26	Sarus Thurston, .....	Norwegian, ..	Miner, .....	33	M.	1	1	Eureka No. 30, ....	Somerset,	Was found dead on the road under trolley wire.
May 6	John Comeskie, .....	Slav, .....	Miner, .....	25	S.	.....	.....	Eureka No. 35, ....	Somerset,	Fatally injured by a fall of coal. He had left a stump of coal to hold the coal up and lay down under the cut of coal to mine out the stump.
11	Valentine Postlemick, .....	Austrian, ....	Road cleaner, .....	43	M.	1	4	Eureka No. 30, ....	Somerset,	Ran car by accident over motor. He was told to get off the track but did not.
27	James Oler, .....	Pole, .....	Miner, .....	42	M.	1	4	Eureka No. 35, ....	Somerset,	Ran his car on the heading to load coal that was not on the road and fell, his head striking the rail; when picked up he was dead; no marks were found on him only where his head struck the rail. The electric wire was right above him.

June	29	Daniel McCarty, .....	American, ....	Miner, .....	40	M. 1	2	Webster No. 5, ....	Cambria,...	Killed by a fall of rock, a pot hole in the roof; an unavoidable accident.
	4	Fadgit Lamon, .....	Slav, .....	Miner, .....	41	M. 1	6	Sonman shaft, ....	Cambria,...	Struck by cars on the slope which had broken loose from rope. This man had no business on the slope, as there is a regular walking road.
	6	Thomas Acon, .....	English, .....	Miner, .....	24	S. ....	....	Webster No. 3, ....	Cambria,...	This man was one of a crowd of miners coming out of the mine; all rushed to get on an empty Dilly trip which hauls the men in the evening; he ran around some timber which enclosed the Bull wheel, and stepped into the wheel.
	18	Andy Stilman, .....	Pole, .....	Miner, .....	28	M. 1	....	Eureka No. 33, ....	Somerset,	Coming out of the mine and was struck by a miner.
Aug.	3	John J. Head, .....	English, ....	Miner, .....	28	S. ....	....	Adams, .....	Somerset,	Head crushed by a fall of coal; he was considered a careful miner, but in this case he neglected to sprag the coal.
Sept.	18	Thomas Davis, .....	Welsh, .....	Miner, .....	28	S. ....	....	Conemaugh slope,	Cambria,...	Crushed by a fall of roof; he was taking down draw slate and above this a bad piece of roof came in, which fell on him.
Nov.	12	Joe Pelsey, .....	Slav, .....	Miner, .....	36	M. 1	1	Rolling Mill, .....	Cambria,...	Killed by a fall of roof; was undermining draw slate, when it fell on him; fall caused by a bad piece of roof above draw slate.
Dec.	10	John Hogsley, .....	Slav, .....	Miner, .....	35	M. 1	2	Webster No. 1, ....	Cambria,...	Head crushed by fall of coal; had commenced to undermine on back of slip and it slid down on him.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Sixth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 1	Leam Sumar.	Belgian.	Miner.	30	S.	Lloydell.	Cambria.	Collar bone broken by a fall of coal.
11	Mike Piapa.	Austrian.	Miner.	36	M.	Eureka No. 36.	Somerset.	Injured by fall of rock.
15	Wm. Parker.	American.	Driver.	22	M.	Webster No. 3.	Cambria.	Fracture of leg; caught between cars.
17	Jacob Miller.	American.	Miner.	29	M.	Mostoller No. 1.	Somerset.	Knee bruised by a fall of coal.
21	John Smith.	American.	Miner.	27	M.	Wenemauk.	Cambria.	Leg broken by a fall of coal.
14	John Sumafsky, Sr.	American.	Miner.	43	M.	Wenemauk.	Cambria.	Severely injured by a fall of coal.
14	John Sumafsky, Jr.	Slav.	Miner.	39	M.	Rolling Mill.	Cambria.	Leg broken; fall of rock.
19	John Hunneuzik.	Slav.	Loader.	19	S.	Eureka No. 32.	Somerset.	Arm and toes crushed by cars. Arm had to be amputated.
March 8	Alex. Farley.	American.	Trip rider.	18	S.	Puritan No. 1.	Cambria.	Arm broken by two motors colliding.
16	Edward Hanks.	American.	Driver.	20	S.	Rolling Mill.	Cambria.	Bruised about body by a mule.
April 15	Mike Musrak.	Polish.	Miner.	26	S.	Sonman shaft No. 2.	Cambria.	Collar bone broken by a fall of coal.
May 2	Angelo Dolo.	Italian.	Miner.	37	S.	Eureka No. 36.	Somerset.	Flesh wound on hand and right leg by cars.
June 27	Thomas Smith.	Irish.	Miner.	42	S.	Webster No. 3.	Cambria.	Leg broken; struck by hauling rope.
29	Geo. Procko.	Slav.	Miner.	32	M.	Henrietta shaft.	Cambria.	Shoulder blade broken by a fall of rock.
June 25	George Mackey.	Irish.	Miner.	25	M.	Webster No. 6.	Cambria.	Injured by fall of rock.
July 1	Frank Kuchuk.	Scottish.	Driver.	31	M.	Henrietta shaft.	Cambria.	Crushed between car and roof.
Aug. 1	Andrew Cahill.	Polish.	Miner.	32	M.	Rolling Mill.	Cambria.	Face burned by gas explosion.
10	Thomas Bottorf.	American.	Miner.	24	S.	Webster No. 3.	Cambria.	Collar bone broken; a lump of coal struck chest.
13	Evan W. Jones.	Welsh.	Driver.	38	M.	Henrietta shaft.	Cambria.	Teeth mashed between cars.
14	James Probert.	American.	Driver.	66	S.	Franklin.	Cambria.	Seriously injured; rope broke on plane and cars ran into weigh house.
Sept. 17	Michael Kanatasco.	Polish.	Miner.	21	S.	Lloydell.	Cambria.	Leg broken; struck by plane rope.
20	Mike Yelon.	Slav.	Miner.	26	M.	Lilly slope.	Cambria.	Back injured by fall of roof.
4	Wm. Pietz.	Polish.	Miner.	40	S.	Krebs.	Somerset.	Hip dislocated by fall of roof.
7	Edward Irvin.	American.	Driver.	28	S.	Webster No. 5.	Cambria.	Leg broken; run over by car.
Oct. 25	Andy Muellner.	Hungarian.	Miner.	23	S.	Coaldale No. 9.	Cambria.	Leg broken between cars.
19	Walter Harvey.	Slav.	Miner.	35	S.	Eureka No. 30.	Somerset.	One eye destroyed by a blown out shot.
Nov. 12	Joe Yubase.	American.	Miner.	22	M.	Rolling Mill.	Cambria.	Back badly injured; fall of slate.
12	Joe Hazler.	American.	Miner.	22	M.	Webster No. 1.	Cambria.	Crushed between motor and cars.
Dec. 17	Vandus Vargo.	Hungarian.	Trakeman.	44	M.	Webster No. 1.	Cambria.	Leg broken between cars.
28	Henry Condy.	French.	Miner.	42	M.	Sonman shaft No. 1.	Cambria.	Fracture of leg by fall of coal.
				25	M.	Portage slope.	Cambria.	Skull fractured by a fall of slate.

# Seventh Bituminous District.

ALLEGHENY, WASHINGTON AND BEAVER COUNTIES.

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Idlewood, Pa., March 20, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of herewith submitting to you my annual report for the Seventh Bituminous Coal District for the year 1901.

There has been a brisk demand for coal, and the relationship between capital and labor has continued harmonious, consequently, there has been great activity in the coal business throughout the year, which was retarded only by lack of railroad facilities to transport the product to market. The inability on the part of the railroad companies to handle the coal has kept the production considerably below what it otherwise would have been.

The State Board of Examiners, at its last meeting made some slight changes in the boundary lines of the district which add somewhat to the total production. By taking the territory included in the district as at present arranged and comparing the output of coal for the years 1900 and 1901, there is an increase in production for the latter year of 764,707 tons. The greater number of mines are now equipped with mining machinery, there being in use at the present time about 271 of the punching type operated by compressed air, and about 171 of the cutter-chain type operated by electricity. The former type of machine has been in use in this district for about twenty years, and I am unaware of any fatal or serious accident having resulted from their use, and the sanitary condition of the mines is somewhat improved by the use of compressed air as a motive power. The electric cutter-chain type of machine has been introduced within recent years, and accidents resulting from the use of electricity are of rather frequent occurrence; besides the use of this type of machine is injurious to the sanitary condition of the mines by reason of the poisonous fumes evolved from large quantities of impure oils which must be constantly poured upon the heated parts of the machinery while it is in motion. Electric locomotives are now extensively used to haul coal from the interior of the mines.

This method of haulage, where the road grades are suitable, is very successful, and with proper precautions they can be operated

with comparative safety. There occurred during the year thirty-five fatal and seventy-three non-fatal accidents, the causes of which will be found in another part of this report. In this connection I deem it unnecessary to make any lengthy comments upon the circumstances attending the various accidents resulting in loss of life or serious personal injury, as such comments would be only a repetition of statements made in former reports, but I may state that the greater number of the accidents were preventible, and in a number of cases were due to carelessness on the part of the victims, while in other instances the evidence would lead to the conclusion that the victims were incompetent either to recognize the danger or to protect themselves therefrom, a fact much to be deplored, but easily comprehended by all who are familiar with the class of labor we are now largely dependent upon to operate the mines. The report contains a brief description of the condition of the several groups of mines, and the improvements made during the year, together with the usual statistical tables; all of which is respectfully submitted.

Yours respectfully,

JAMES BLICK,  
Inspector.



Table Showing the Production of Coal. Number of Persons Employed by Each Company and Average Number of Tons Produced per Employee. Number of Fatal Accidents and Tons of Coal Produced per Life Lost. Number of Fatal and Non-Fatal Accidents and Number of Tons of Coal Produced per Accident in the Seventh Bituminous District 1901.

Names of Operators.	Number of persons employed.	Number of tons of coal produced.	Number of fatal accidents.	Number of tons of coal produced per life lost.	Number of accidents, fatal and non-fatal.	Number of tons produced per accident.
Pittsburg Coal Co., .....	6,766	5,289,628	26	203,451	80	66,120+
New York and Cleveland Gas Coal Co., ..	893	775,163	1	775,163	3	258,387+
Monongahela River C. C. & C. Co., .....	785	519,170	1	519,170	2	259,585
Mansfield Coal and Coke Co., .....	396	443,634	2	221,817	6	73,939
Pittsburg and Buffalo Co., .....	254	171,674	2	85,837	5	34,334+
Carnegie Coal Co., .....	230	185,800	1	185,800	1	185,800
Midland Coal Co., .....	310	205,485	.....	.....	2	102,742+
Castle Shannon Railroad Co., .....	124	111,010	1	111,010	3	97,003+
Mankidick Coal Co., .....	108	70,000	.....	.....	.....	.....
Witch Hazel Coal Co., .....	149	110,244	1	110,244	3	36,748
Harrison Gas Coal Co., .....	61	56,703	.....	.....	.....	.....
Pan Handle Mining Co., .....	53	54,397	.....	.....	2	27,153+
Shaw Coal Co., .....	170	33,668	.....	.....	1	33,668
Amyville-Youghiogheny Gas Coal Co., .....	53	27,350	.....	.....	.....	.....
Meadow Lands Coal Co., .....	100	35,848	.....	.....	.....	.....
J. V. H. Cook & Sons, .....	47	23,601	.....	.....	.....	.....
Chartiers Coal and Coke Co., .....	25	17,400	.....	.....	.....	.....
P. F. Hormel, .....	28	11,092	.....	.....	.....	.....
Jacob Weinman, .....	26	15,842	.....	.....	.....	.....
Thomas Fox Estate, .....	19	11,000	.....	.....	.....	.....
Bulger Block Coal Co., .....	42	16,000	.....	.....	.....	.....
W. S. B. Hayes, .....	14	8,555	.....	.....	.....	.....
G. Vogel, .....	22	6,726	.....	.....	.....	.....
Verner Coal and Coke Co., .....	26	3,766	.....	.....	.....	.....
Mount Oliver Coal and Stone Co., .....	19	8,000	.....	.....	.....	.....
G. W. Kramer, .....	28	15,050	.....	.....	.....	.....
Total and average, .....	10,758	8,226,705	35	276,561	108	106,861+

Average production in tons per employee, 764.7.

### Summary of Statistics.

Number of mines in the district, .....	76
Number of mines in operation during 1901, .....	73
Number of tons of coal produced, .....	*8,226,705
Number of tons shipped, .....	7,907,827
Number of tons used for steam at mines, .....	113,661
Number of tons sold to employes and local trade, ...	205,890
Approximate number of tons of machine mined coal, ..	4,628,720
Number of persons employed inside the mines, .....	9,530
Number of persons employed outside the mines, .....	1,228
Number of fatal accidents, .....	35
Number of tons of coal produced per each fatal accident, .....	235,048+
Number of non-fatal accidents, .....	73
Number of tons produced per each non-fatal accident, ..	112,694+

\*The discrepancy between the number of tons of coal shipped, used for steam and sold to local trade and the total production is 673 tons, which was produced in 1900.

Number of persons employed per each fatal accident, .....	307+
Number employed per each non-fatal accident, .....	147+
Number of wives made widows by accidents, .....	16
Number of children orphaned, .....	35
Number of kegs of powder used, .....	13,593
Number of pounds of dynamite used, .....	2,583
Number of cylindrical boilers in use, .....	30
Number of tubular boilers, .....	151
Number of steam locomotives, .....	13
Number of electric locomotives, .....	30
Number of horses and mules, .....	863

Only one locomotive is in use inside the mines.

Note.—A considerable quantity of explosives is supplied the miners by persons not connected with the operating firms, and is not reported.

Classification of Accidents.		Fatal.	Non-fatal.	Total.
By falls of slate, .....	18	30	48	
By falls of roof, .....	3	4	7	
By falls of coal, .....	5	11	16	
By mine cars, .....	6	15	21	
By electric shock, .....	2	2	4	
By gas explosions, .....	1	6	7	
By mining machines, .....	1	2	3	
By powder blasts, .....		1	1	
Miscellaneous inside, .....		2	2	
Miscellaneous outside, .....		2	2	
Total, .....	35	73	108	

Occupations of Persons Killed or Injured.	Fatal.	Non-fatal.	Total.
Miners, .....	28	50	78
Drivers, .....	3	10	13
Machine runners, .....	1	3	4
Machine helpers, .....	1	3	4
Road men, .....	1	3	4
Motive men, .....	1	1	2
Engine men, .....	1	1	2
Trip runners, .....	1	1	2
Laborers, .....	1	3	4
Total, .....	35	73	108

Nationalities of Persons Killed or Injured.	Fatal.	Non-fatal.	Total.
Americans, .....	8	19	27
English, .....	12	5	7
Welsh, .....	12	2	2
Scotch, .....	4	4	4
Irish, .....	12	12	4
Germans, .....	5	7	12
Poles, .....	4	8	12
Slavs, .....	3	4	7
Hungarians, .....	5	6	6
Italians, .....	3	8	13
Austrians, .....	3	2	5
Russians, .....	2	1	3
Belgians, .....	2	2	2
French, .....	1	3	4
Total, .....	35	73	108

Table giving name of mine, method of ventilation and haulage, kind of opening and whether worked by pick or machine in the Seventh Bituminous District.

Name of Mine.	Method of Haulage.	Method of ventilation.	Kind of opening.	Pick or machine.	Type of Machine.	Power used to operate machines.
Moon Run, .....	Electric locomotives, .....	Fan and furnace, .....	Drift, .....	Machine, .....	Morgan-Gardner, Ingersoll and Sullivan, .....	Electricity and compressed air.
First Pool No. 1, .....	Head and tail rope, .....	Fan, .....	Drift, .....	Machine, .....	Harrison, Sullivan and Ingersoll, .....	Compressed air.
First Pool No. 2, .....	Air locomotive and head and tail rope, .....	Fan, .....	Shaft, .....	Machine, .....	Harrison and Ingersoll, .....	Compressed air.
Jumbo, .....	Head and tail rope, .....	Fan, .....	Drift, .....	Machine, .....	Sullivan, .....	Compressed air.
Brier Hill, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Harrison and Ingersoll, .....	Compressed air.
Nickel Plate, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity.
Laurel Hill No. 1, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Harrison and Sullivan, .....	Electricity.
Laurel Hill No. 2, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity.
Champion, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Ingersoll, .....	Compressed air.
National, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity.
Nak Ridge, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity.
Cherry, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Boyl, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity.
Port Pitt, .....	Electric locomotive, .....	Furnace, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Grant, .....	Electric locomotive, .....	Fire basket, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity.
Nixon, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Leasdale, .....	Head and tail rope, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Summer Hill, .....	Head and tail rope, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Lower Hill, .....	Electric locomotive, .....	Furnace, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Bridgville, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Slope, .....	Mules, .....	Fan, .....	Slope, .....	Machine, .....	Jeffrey, .....	Electricity.
Bonn, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.
Allison, .....	Mules, .....	Fire baskets, .....	Drift, .....	Machine, .....	Morgan-Gardner and Jeffrey, .....	Electricity.
Vulcan, .....	Mules, .....	Fan, .....	Slope, .....	Machine, .....	Morgan-Gardner and Jeffrey, .....	Electricity.
Laurel Hill No. 5, .....	Electric locomotive, .....	Fan, .....	Shaft, .....	Machine, .....	Morgan-Gardner and Ingersoll, .....	Electricity and compressed air.
Frederickmore, .....	Mules, .....	Fan, .....	Shaft, .....	Machine, .....	Harrison and Sullivan, .....	Compressed air.
Ridgeway, .....	Mules and rope, .....	Fan, .....	Slope, .....	Machine, .....	Harrison, Ingersoll and Sullivan, .....	Compressed air.
Pan Handle, .....	Head and tail rope, .....	Fan, .....	Drift, .....	Machine, .....	Ingersoll and Sullivan, .....	Compressed air.
Essex No. 1, .....	Head and tail rope, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity.

Harrison, .....	Electric locomotive, .....	Fan, .....	Slope, .....	Machine, .....	Ingersoll and Sullivan, .....	Compressed air, .....
Lake Superior, .....	Mules, .....	Fan, .....	Slope, .....	Machine, .....	Jeffrey, .....	Electricity, .....
O. L. C., .....	Mules, .....	Fan, .....	Drift, .....	Machine, .....	Link belt, .....	Electricity, .....
Essen No. 2, .....	Electric locomotive, .....	Fan, .....	Slope, .....	Machine, .....	Link belt and Morgan-Gardner, .....	Electricity, .....
Essen No. 3, .....	Electric locomotive, .....	Furnace, .....	Slope, .....	Machine, .....	Link belt and Morgan-Gardner, .....	Electricity, .....
Essen No. 2, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity, .....
Jackson, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Machine, .....	Ingersoll and Sullivan, .....	Compressed air, .....
Margra Run, .....	Electric locomotive, .....	Furnace, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity, .....
Partridge, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Jeffrey, .....	Electricity, .....
Hatch & Marshall, .....	Steam locomotive and head rope, .....	Fan, .....	Drift, .....	Machine, .....	Sullivan, .....	Compressed air, .....
Peck Haven, .....	Electric locomotive, .....	Furnace, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity, .....
Lake Run, .....	Mules, .....	Fan, .....	Slope, .....	Pick, .....	.....	.....
Oak Hill No. 4, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Oak Hill No. 5, .....	Mules, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Quincy, .....	Mules, .....	.....	Drift, .....	Pick, .....	.....	.....
Wadon, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
..... Street Run, .....	Head and tail rope, .....	Furnace, .....	Drift, .....	Pick, .....	Morgan-Gardner, .....	Electricity, .....
Millard No. 1, .....	Electric locomotive, .....	Fan, .....	Drift, .....	Machine, .....	Morgan-Gardner, .....	Electricity, .....
Mansfield No. 2, .....	Mules, .....	Fan, .....	Drift, .....	Machine, .....	Harrison, Ingersoll and Sullivan, .....	Compressed air, .....
Hazel, .....	Electric locomotive, .....	Fan, .....	Slope, .....	Machine, .....	Morgan-Gardner, .....	Electricity, .....
Madaw Lakes, .....	Mules, .....	Fan, .....	Slope, .....	Machine, .....	Morgan-Gardner and Jeffrey, .....	Compressed air, .....
Rich Hill, .....	Mules, .....	Fire basket, .....	Slope, .....	Pick, .....	Jeffrey, .....	Electricity, .....
Katie, .....	Mules, .....	Fire basket, .....	Slope, .....	Pick, .....	Morgan-Gardner, .....	Electricity, .....
Hy-Vee, .....	Mules, .....	Fan, .....	Slope, .....	Pick, .....	Morgan-Gardner, .....	Electricity, .....
Carrington, .....	Electric locomotive, .....	Furnace, .....	Drift, .....	Machine, .....	.....	.....
Shaw Ridge, .....	Mules, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Yarnor, .....	Mules, .....	Fire basket, .....	Slope, .....	Pick, .....	.....	.....
Bulgar, .....	Mules, .....	Fan, .....	Slope, .....	Pick, .....	.....	.....
Hickman, .....	Mules, .....	Fire basket, .....	Shaft, .....	Machine, .....	.....	.....
Witch Hazel, .....	Head rope, .....	Fan, .....	Drift, .....	Pick, .....	Ingersoll, .....	Electricity, .....
Peck, .....	Mules, .....	Furnace, .....	Slope, .....	Pick, .....	.....	Compressed air, .....
C. C. the Shannon, .....	Head rope, .....	Fan, .....	Slope, .....	Pick, .....	.....	.....
Streets Run, .....	Mules, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Calhoun, .....	Mules, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Belwood, .....	Mules, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Avonman, .....	Mules, .....	Furnace, .....	Drift, .....	Pick, .....	.....	.....
Crescent, .....	Mules, .....	Fire basket, .....	Drift, .....	Pick, .....	.....	.....
Lanck, .....	Mules, .....	Fire basket, .....	Slope, .....	Pick, .....	.....	.....

Note.—There are in use in this district 94 Harrison, 89 Ingersoll and 88 Sullivan mining machines of the punching type, making a total of 271 of this type of machine, all of which are operated by compressed air. There are also 10 Morgan-Gardner, 80 Jeffrey and 17 Link Belt machines and the cutter chain type, making a total of 171 of this type of machine, which are operated by electric power. The total tonnage of marketable coal produced in this district during the year is 1,288,720 tons, of which 700 tons are produced by machine mined coal, which will average about five feet in height of marketable coal.





First Pool No. 2.	1	13 ft. 6 in.	7 ft. 6 in.	12 ft. 6 in.	14 ft. 6 in.	12 ft. 6 in.	18 ft. 6 in.	24 ft.	50 ft.	292
Lick Run.	1	25 ft.	7 ft. 6 in.	7 ft. 6 in.	18, 600	4, 500	18, 000	100	45, 000	45
Walton.	1	12 ft.	4 ft.	4 ft.	6, 000	15, 000	18, 000	222	45, 000	24
Boocks Run.	1	7 ft.	4 ft.	4 ft.	11, 000	15, 000	15, 000	137	22, 000	25
Fair Haven.	1	8 ft.	4 ft.	4 ft.	11, 300	14, 000	8, 200	131	22, 000	25
Castle Shannon.	1	7 ft.	4 ft.	4 ft.	7, 000	5, 000	11, 400	121	22, 000	25
Castle Shannon.	1	10 ft.	4 ft.	4 ft.	7, 000	15, 000	8, 000	17	12, 000	70
Hayward Marshall.	1	23 ft.	7 ft. 6 in.	7 ft. 6 in.	7, 200	15, 000	13, 000	203	90, 000	43
Moan Run, Section 1.	1	18 ft.	7 ft.	7 ft.	11, 000	11, 000	13, 000	418	85, 000	35
Moan Run, Section 2.	1	8 ft.	6 ft.	6 ft.	11, 000	8, 000	26, 000	25	28, 000	20
Moan Run, Section 3.	1	6 ft.	3 ft. 4 in.	3 ft. 4 in.	5, 000	6, 000	11, 000	25	65, 000	31
Grant.	1	9 ft.	6 ft.	6 ft.	20, 000	6, 000	11, 000	25	65, 000	31
Carnegie.	1	8 ft.	5 ft. 6 in.	5 ft. 6 in.	5, 000	6, 000	11, 000	117	25, 000	22
Fort Pitt.	1	8 ft.	4 ft.	4 ft.	4, 000	11, 000	11, 000	85	18, 800	21
Bay.	1	8 ft.	4 ft. 7 in.	4 ft. 7 in.	8, 000	12, 000	12, 000	97	27, 000	27
Cherry.	1	12 ft.	4 ft.	4 ft.	15, 000	12, 000	12, 000	100	17, 000	170
Pine Ridge.	1	12 ft.	4 ft.	4 ft.	15, 000	12, 000	12, 000	72	15, 000	22
National.	1	11 ft.	4 ft. 6 in.	4 ft. 6 in.	7, 000	12, 000	12, 000	72	15, 000	22
Champion.	1	11 ft.	4 ft. 6 in.	4 ft. 6 in.	10, 000	12, 000	12, 000	175	85, 000	48
Stable Hill No. 1.	1	20 ft.	6 ft.	6 ft.	15, 000	14, 200	12, 000	159	35, 000	17
Stable Hill No. 2.	1	10 ft.	5 ft. 6 in.	5 ft. 6 in.	10, 000	6, 000	8, 000	13	32, 000	14
Brier Hill.	1	8 ft.	5 ft.	5 ft.	12, 000	12, 000	7, 000	11	32, 000	17
Essen No. 1.	1	20 ft.	6 ft.	6 ft.	8, 000	15, 000	6, 000	149	67, 000	44
Winch Hazel.	1	12 ft.	4 ft. 8 in.	4 ft. 8 in.	7, 000	12, 000	7, 000	136	27, 000	19
Harrison.	1	25 ft.	7 ft. 6 in.	7 ft. 6 in.	9, 500	20, 000	7, 000	174	60, 000	38
Lake Superior.	1	8 ft.	3 ft. 6 in.	3 ft. 6 in.	35, 000	10, 000	14, 000	125	45, 000	38
O. L. C.	1	12 ft.	5 ft.	5 ft.	10, 000	9, 500	12, 000	81	36, 000	28
Essen No. 2.	1	18 ft.	4 ft. 9 in.	4 ft. 9 in.	10, 000	9, 500	12, 000	134	28, 500	28
Essen No. 3.	1	10 ft.	6 ft.	6 ft.	10, 000	7, 000	19, 000	65	56, 000	81
Hickman.	1	10 ft.	5 ft.	5 ft.	10, 000	11, 000	12, 000	54	10, 000	43
Federal No. 2.	1	10 ft.	4 ft.	4 ft.	9, 000	12, 000	12, 000	111	25, 000	69
Dickson.	1	10 ft.	4 ft.	4 ft.	10, 000	14, 000	11, 000	111	28, 000	27
Dargatum.	1	18 ft.	6 ft.	6 ft.	10, 000	10, 000	7, 000	135	47, 000	31
Oak Hill No. 1.	1	6 ft.	4 ft. 9 in.	4 ft. 9 in.	13, 000	10, 200	12, 000	287	51, 000	17
Oak Hill No. 2.	1	8 ft.	4 ft. 4 in.	4 ft. 4 in.	8, 000	15, 000	5, 600	230	48, 000	15
Oak Hill No. 3.	1	8 ft.	3 ft. 8 in.	3 ft. 8 in.	4, 500	8, 000	9, 600	190	34, 000	17
Waukena.	1	7 ft.	25 ft.	25 ft.	4, 000	4, 000	9, 600	26	4, 000	153
Orean.	1	1	1	1	5, 000	5, 000	5, 000	12	5, 000	416

\*Ventilation produced by the fan located at Summer Hill mine.

†Pine basket.

‡Fan under construction, but not yet in operation.

Note.—The quantity of air produced per each employee is calculated for the whole number of persons employed inside, but in nearly all machine mines, part of the men work at night.

### General Condition of Mines in the District.

Operations on the Monongahela river, on the Wheeling Division of the Baltimore and Ohio Railroad, and on the West End Railroad.

There are fourteen mines in this division of the district, all of which have been in active operation during the year. I have been informed that the Venture mine located at Banksville is permanently abandoned, and that the coal still remaining will be recovered through the adjoining mines. There has been installed at the Lick Run mine a twenty-five inch Vulcan fan so that the ventilation is now first-class. At the Fair Haven mine a shaft has been sunk near the face of the main gangway about two miles distant from the mine entrance, which will be used as a main station for drainage and ventilation; a new ventilating fan and the necessary pumping machinery will be provided in the near future. I may state that all of the mines in this part of the district are now in reasonably good condition.

### Moon Run and Montour Run Mines.

At these points four mines are located, namely Moon Run, Dickson, Margerum and Partridge. The moon Run mine, is a very large operation, and two fans and one ventilating furnace are used to produce the ventilation, one of the fans having been provided during this year. Three electric locomotives are in use to haul coal to the tippie. Both electricity and compressed air are used to operate the mining machines.

The Dickson mine is well supplied with ventilation, but the drainage at times is not of the best, the surface cover it light, and during the wet seasons large volumes of surface water penetrate through the broken strata into the mine, making it exceedingly difficult to keep the roadways properly drained at such times.

At the Margerum mine a 6-inch Clark fan has been installed to ventilate No. 2 section of workings; No. 1 section is ventilated by a furnace which will be replaced by a fan, after which the ventilation in all parts of the mine will be good.

At the Partridge mine a 16-foot Brazil fan has been installed, which will produce an abundance of air for several years to come.

### Mines Located Along the Main Line of the Pan Handle Railroad.

There are sixteen mines in active operation in this part of the district, three of which are new operations. Two Capell fans have been installed during the year, one at the Buiger shaft and one at the Carnegie mine. In most instances the condition of the mines is satisfactory, but in some few cases there is room for improvement principally in the matter of drainage and ventilation, also in proper distribution of the air-currents through the workings.

The three new openings are Shaw No. 1 a drift mine located at Midway, Bulger shaft located at Bulger, and the Verner mine a slope opening also located at Bulger, all of which are in active course of development.

### Operations on the Chartiers Valley and B. & M. Branches of the Pan Handle Railroad.

There are twenty mines in active operation in this division of the district. Two new openings, Midland Nos. 2 and 3, are in course of construction, and will be ready to ship coal in the near future. At Laurel Hill No. 2 mine a number of persons have been employed throughout the year cleaning up and repairing the roadways and working places, but no coal has been produced. At Mansfield No. 2 mine a small Capell fan has been installed to ventilate No. 1 section of the mine workings, and the other parts of the mine are to be ventilated by the large fan formerly used to ventilate the whole mine. This arrangement will probably increase the air volume upwards of twenty-five thousand cubic feet per minute, which should be sufficient for some time to come. An inlet air shaft is being sunk near the face of the workings, which will also add to the improvement in ventilation. A 16-foot Capell fan has been installed at the Summer Hill mine, which will also ventilate Nixon and Leasdale mines. I have not had an opportunity to measure the air volume since the fan was set in motion, but its capacity when driven to a reasonably safe speed should not fall short of two hundred and fifty thousand cubic feet per minute, provided the air-ways are maintained in good condition. A Capell fan 13.5 inches in diameter has been installed at Hazel mine and the same type of fan eleven feet in diameter has been installed at Midland No. 1 mine. I may say that all of the mines in this part of the district are now equipped with ample ventilating facilities, excepting Allison, Rich Hill and Katie, each of which will require more effective appliances in the near future.

### P. C. & Y. R. R.

Eleven mines are being operated along the above railroad. The Beachmount mine when last inspected was in bad condition, the ventilation being inadequate. The second escape passage-way was found impassible by reason of water and roof falls, and the drainage seemed to receive no attention whatever, and to sum the matter up the place is simply a hole in the ground and not worthy to be called a mine. It had not been operated for several years until recently. There remains only a few acres of coal to be mined out, and about twenty-four persons are employed inside. I have taken action with a view to having the place put in legal condition. Federal No. 2 mine



during the summer months was in an unsatisfactory condition, the ventilation not being properly conducted to the face of the entries, but on my last visit I noticed considerable improvement. It is also the intention to erect another furnace to ventilate the section of workings where the air currents were found inadequate.

A fan has been provided at O. I. C. mine and the air volume produced is now ample for all requirements. All of the other mines in this section are in reasonably fair condition.

### Mines in the Neighborhood of Turtle Creek.

There are five mines in this region. Oak Hill Nos. 4 and 5, which were in satisfactory condition. The air volume in No. 4 is not as great as in some other mines, but very little blasting is done in mining, and the atmosphere in all parts of the workings was found pure and healthful, much more so than in some mines where the ventilation is more abundant, but is contaminated by large volumes of powder smoke.

The Duquesne mine when last inspected was not in good condition, the ventilation being sluggish. I requested the general manager to provide a new ventilating furnace and he promised that my request would be complied with.

The Ocean and Weinman mines are both small operations and seldom employ more than nine persons inside, except in the fall and winter seasons. Both mines were in reasonably good condition when last inspected.



Names of Persons Who Were Granted Certificates of Competency for Mine Foreman, and Dates When the Examinations were Held in the Seventh Bituminous District, 1885 to 1902 Inclusive.

Dates.	Names.	Dates.	Names.
Nov. 25, 1885.	Thomas Gray. Wm. H. Wood. Henry Nicholson. Frank Cornell. John Watt. Thomas Miller. Samuel Kinsey. James D. McClean. Robert Smart. Ruben Street. John Stobie. Daniel Boden. Charles Wingeworth. David Allen. Fred. C. Keighley. John W. Davis. Wm. Coulson. Fred Rowe. Thomas Renshaw. John Bonner. Wm. Sheerin. Mathew Creevey. George Sutherin. Thomas Fowler.	Jan. 14, 1890.	John Walter. Stephen Arkwright. Walter O. Malley. Charles A. Wilhelm. Jacob Mayer. Henry C. Heath. John T. Davidson. Peter Hormel. Wm. H. Linsley. John E. Hampson. Samuel McKinney. Robert Cochran. Victor Stampfly. James Collins. Wm. Johnson. Matthew Heron. Thomas Harris. Thomas Ball. Wm. Chappell. Hugh McMurray. Paul Stinner. George Roebuck. Wm. J. Barker. James Browning. Frank Ransick. David Walters. Israel Morris. Robert Watson.
March 2, 1886.	Jerry Dillon. C. P. Mayer. Wm. Beane. John McDonald. Joseph Cartright. Griffith Williams. James McGregor. George Archbold. Richard Archbold. John R. McBroome. John A. Hart. J. F. Anderson. Charles R. Trew. Wm. B. Marris. John Harris. Henry D. Thompson. John Nicholson. Charles Fereday. D. W. Phillips. H. W. O. Lett. John Brown. Thomas Bartoft. Thomas Matthews. John McGonegal. James McGonegal.	Dec. 2, 1890.	John F. Mullooly. Joseph E. Wrightman. Wm. Guthrie. A. L. Knabe. George Robson. Samuel Shakespear. J. N. King. James Newman. John Keag. Allen Irvine. Thomas Beadling. Reuben Booth. J. E. Mills. James Henderson. Thomas Smith. Ezra Cattley. H. L. Henderson. Alexander Cochran. Samuel A. Tomes.
Jan. 11, 1887.	George J. Burns. George Volkert. James Reid. John J. Duncan. Wm. H. Ambler. George Bell. David Young. William Duncan. John B. Stone. Wm. W. Carter. Charles McGregor. John Patterson. Samuel Jones. John Usher. F. R. Morton. Wm. C. Gartley. Ernest Debuison. Charles Watson. Richard Rowley. Thomas Howell. Julius C. Esmiol. T. D. Stewart. John C. Werner.	Jan. 26, 1892.	Wm. Jamison. John F. Mullooly. Joseph E. Wrightman. Wm. Guthrie. A. L. Knabe. George Robson. Samuel Shakespear. J. N. King. James Newman. John Keag. Allen Irvine. Thomas Beadling. Reuben Booth. J. E. Mills. James Henderson. Thomas Smith. Ezra Cattley. H. L. Henderson. Alexander Cochran. Samuel A. Tomes.
Jan. 10, 1888.	Robert Nicholson. John Johnson. Austin King. Peter Watkinson. John D. Haydin. E. B. Davis. Martin C. Gray. James Bailey. A. C. Whyel. G. Molsberger.	Jan. 16, 1894.	James Clark. Charles K. McCaffrey. Simon P. McCaffrey. Michael McQuade. John A. Gregory. Wm. Langan. Wm. J. Neilson. E. W. Altman. Marth Keller. Edward O. Toole. James Painham. Hugh Dresher. Michael A. Roy. Robert Nelson. Robert Lightburn. Charles Flint. Robert McKinney. David Brown. James Goustead. Henry Stype. Wm. Underwood. Adolph Hess. A. H. Yeats. John Simcock. David Watkins. David Thomas. Charles Wilhelm. W. S. Campbell. Wm. Gregory. Hugh Clark. James Rudge. James T. Colburn. Thomas H. Thompson. Henry Cattley. C. P. Byrne.
Jan. 21, 1889.		Jan. 22, 1895.	
		April 21, 1896.	
		April 20, 1897.	
		March 1, 1898.	
		Jan. 24, 1899.	

Dates.	Names.	Dates.	Names.
Jan. 16, 1900.	E. R. Wise. Joseph Lindon. A. B. Henderson. Joseph E. Hodkiss. Richard P. Berger. Chas. F. McKay. W. W. Peehar.		John S. Snyder. Edward Joyce. J. W. Meredith. Thomas F. Allsopp. Robert H. Heath. Wm. E. Henderson. John Mahony. Charles P. Henster. Wm. Lewis. Robert Young.
Jan. 2, 3, 4, 1901.	John Scott Herron. George Summers. James J. Croghan.		

Note.—In the year 1901 there were 65 applicants who attended the examination, 13 of whom were granted certificates for mine foreman and 23 for fire boss. There has not been any second grade certificates for mine foreman issued in this district. From 1885 up until 1897 the board of examiners was James Blick, Inspector; Roger Hartley, coal operator and Augustus Stinner, miner. After the death of Mr. Hartley, Daniel Boden, Superintendent, was appointed to fill the vacancy. This is the only change made in the board since its formation in 1885. The names of fire bosses are given on a separate list.

## Name of Persons Granted Certificates to Act as Fire Boss Previous to the Act of 1893.

Names.	Names.	Names.	Names.
Thomas Fowler, Mathew Creevey, Frank Cornell, Thomas Burtoft, Dennis Wardley, Thomas Gray, John W. Davis, Wm. Duncan, Luke Creevey, Alex. Thompson, Francis Clark, Fred. C. Keighley, Jerry Dillon, Wm. Coulson, John Phillips, Wm. Sheerin, John Usher, John McDonald, Chas. Fereday, Samuel Kinsey, Benj. Fereday, Levi Ludwick, Wm. Carmichael, Harry O. Lett, Thomas L. Williams, Julius Esmiol, Fred. Rowe, Daniel Boden, Reuben Street, John Patterson, Griffith Williams, Wm. Broadhead, James Winter, James Pollock, Robert Grant, Thomas Renshaw, James Reid, James Browning, George Toward, James Clark, Thomas Grafton, Thomas T. Evans, Peter Murray, John Matheson, John Neish, John McClean, Charles Dowling, Dominic McGreedy, Chas. Warner, David Young, Wm. W. Carter, John Stobie, Adam L. Knabe, Joseph Roadham, John Donaldson, James Charlesworth, David Allen, Thomas Miller, John C. Kyte, John B. Stone, Peter Watkins, G. H. Owens, George Lowther, Robert Nicholson, Chas. Flint, John E. Brown, Walter O. Molley, George H. Davis,	Peter Hensler, Wm. Holloway, Thomas Juinn, James Cornell, Ruben Booth, Francis Ransick, James Purrie, Samuel Wilkins, James F. Cook, Benjamin Lake, Robert Beadling, John Burt, John T. Davidson, Edward O. Toole, John Clapperton, Thomas Ball, Robert Watson, George Volkert, Joseph Gartley, James Parkinson, Joseph Fielding, Wm. Gregory, James Collins, Israel Murris, Richard Dillon, Thomas Martin, John Case, John Richards, Wm. Sedden, John McGregor, George Watson, Mathew Herron, Alexander Patrick, Wm. Parnham, Jonathan Winter, George Robson, Wm. D. Sharp, James Parnham, Ezra Cattley, John E. Hampson, Frank Surtees, James Connelly, John King, James Walker, Allen Irvine, Hugh McMurray, A. T. Werner, Robert Lightburn, Wm. Morris, Andrew Thorp, Thomas J. Price, John Keay, Solomon Stroup, Simon McCaffrey, J. A. Gregory, Wm. Strauss, Daniel McCullough, Harry Willis, Wm. Naylor, Henry Cattley, Constantine McGregor, Terrance Kelley, John R. Brennan, Simeon Ball, Ralph Bell, Frank Jackson, James B. Riley, Wm. Langan,	A. Yeats, Daniel Watkins, James Rudge, Edward Joyce, Thomas Perry, Wm. Underwood, John S. W. Snyder, Nicholas Brocker, Thomas Hancock, Michael McQuade, Thomas Keenlyside, Harry Neal, John Young, David Brown, W. J. Neilson, Wm. E. Hampson, Michael A. Roy, Andrew Boa, Patrick Halloran, Joseph Young, Edward H. Speakman, George Cattley, John Jasper, Thomas Goody, Moses Morgan, John Phythyon, Henry Stype, Wm. Grant, Thomas Hancock, Robert Wild, James Boustook, Robert McKenney, Frank P. Manck, John Fleming, David Martin, David Thomas, Charles P. Byrne, W. W. Laughlin, Charles Wilhelm, James McGibbeny, A. A. Hess, John Simcock, Joseph E. Hodgkiss, Thomas D. Smith, Joseph Tomlinson, Wm. Lewis, Richard Maize, Joseph A. Gordon, John Faulds, Richard P. Berger, W. W. Pechar, John Humphreys, Eli Cattley, Thomas H. Thompson, Wm. Pope, James T. Colburn, George Wilson, Walter Wilson, W. S. Campbell, James W. Meredith, Thomas F. Allsopp, James J. Groghan, Wm. Drennan, Chas. McKay, George Atkins, A. E. Henderson, Joseph Landon, J. Scott Herron,	Howard C. Hutton, John Fulton, Albert Rudge, H. W. McGibbeny, Wm. Phillips, George H. Summers, Evan Davis, John Clapperton, Wm. E. Henderson, John Mahony, Chas. P. Hensler, Leon Randour, Harry Evans, Thomas Thomas, Thomas Cox, John Herron, Joseph Travis, Joseph Hofrichter, Robert Taylor, John North, John Rafferty, John Trigger, Wm. M. Kelvington, Richard Maize, Wm. Hampson, Leonard Hoyland, Wm. Welsh, John Harley, John Humpage, Uriah Bellingham, Joseph McGill, John O'Kerr, T. M. Smith, Ugene S. Wade, Benjamin Johnson, Samuel T. Oldham, Charles E. Craig, Wm. H. James, G. W. Boden, Charles Johnson, John R. Conley, James Adamson, John K. Davis, Lowrie Wirtz, James Maize, Henry Kohl, George Waugh, Thomas Silcox, Robert Howard, John L. Moynagh, W. D. Johnson, Michael Welsh, Stephen Jones, George Smith, M. H. McMillan, Thomas Wardle, Robert Thompson, Calin McLay, Daniel McKay, Joseph Civer, William Elliott, Jeremiah Johnston,.... George H. Smith, Arthur Hampson, John Morris, Abraham Marriott, Frank Morgan, George W. Warring, Chas. E. Johnson,

Note.—The above list includes the names of all persons granted certificates to act as fire bosses in the Seventh Bituminous District from the year 1885 up to and including the examination held January 21, 22 and 23, 1902.



Partidge Co.	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	W. C. Murray	Imperial	M. T. R. R.
Hartley & Marshall	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	F. M. Fritchman	Banksville	West End R. R.
Fair Haven	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	P. J. Keeling	So. Side Pittsburg	B. & O.
Lick Run	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	W. B. McCoy	Finleyville	
[New York and Cleveland Gas Co.]						
Oak Hill No. 4	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	W. F. Craig	Turtle Creek	P. B. & L. E.
Oak Hill No. 5	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	Hugh Dunning	Edgewood Park	P. B. & L. E.
Duquesne	Allegheny	G. W. Schluederberg	Hussey Bldg., Pbg.	R. Green		P. R. R.
Monongahela River C. C. & Co.						
Becks Run	Allegheny	O. A. Blackburn	Pittsburg	B. M. Thomas	Redman Mills	River
Walton	Allegheny	O. A. Blackburn	Pittsburg	John M. Kapp	Redman Mills	River
Hays Street Run	Allegheny	O. A. Blackburn	Pittsburg	Wm. Fillabom	Hope Church	River
Midland Coal Co.	Washington	A. C. Munhall	Pittsburg	S. H. Blair	Houston	P. C. C. & St. L.
Midland Nos. 1, 2 and 3						
Mansfield C. and C. Co.	Allegheny			Daniel Boden	Carnegie	P. C. C. & St. L.
Mansfield No. 2						
Pittsburg and Buffalo Co.	Washington	David G. Jones	Canonsburg	David G. Jones	Canonsburg	P. C. C. & St. L.
Hazel						
Meadow Lands Coal Co.	Washington	W. L. Dixon	Pittsburg	Alex. McLean	Meadow Lands	P. C. C. & St. L.
Meadow Lands						
J. V. H. Cook & Sons	Washington			R. M. Cook	Meadow Lands	P. C. C. & St. L.
Rich Hill						
Anyville-Youghiogheny Gas Coal Co.	Allegheny	J. B. Stone	Suterville	H. W. Mackintosh	Bridgville	P. C. C. & St. L.
Katie						
Pan Handle Mining Co.	Allegheny	John Blyth	Pittsburg			P. C. C. & St. L.
Blyth						
Carnegie Coal Co.	Allegheny	R. P. Durgan	Carnegie			P. C. C. & St. L.
Markelick Coal Co.	Allegheny		Oakdale Station			P. C. C. & St. L.
Pine Ridge						
Shaw	Washington	John F. Atcheson	Pittsburg	David Brown	Midway	P. C. C. & St. L.
Shaw Coal Co.						
Verner Coal and Coke Co.	Washington	Thomas Beading	Carnegie	Thomas Gray	Carnegie	P. C. C. & St. L.
Verner						
Tulger Block Coal Co.	Washington					P. C. C. & St. L.
Bulger						



TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Chartiers Coal and Coke Co. Hickman, .....	Allegheny, .....	J. T. M. Stonerobad, .....	Carnegie, .....	Wm. Neilson, ....	Federal, .....	P. C. & Y.
Witch Hazel Coal Co. Witch Hazel, .....	Allegheny, .....	David Jacob, .....	Beading, .....	.....	.....	P. C. & Y.
P. F. Hormel. Beachmount, .....	Allegheny, .....	P. F. Hormel, .....	Hickman, .....	E. J. Lewis, ....	Hickman, .....	P. C. & Y.
Thomas Fox Estate. Fox, .....	Allegheny, .....	J. T. Fox, .....	West End, Pittsb'g.	J. T. Fox, .....	West End, Pittsb'g.	.....
Pittsburg and Castle Shannon K. R. Co. Castle Shannon, .....	Allegheny, .....	James M. Bailey, .....	S. Side, Pittsburg.	E. J. Reamer, ....	So. Side, Pittsburg.	P. & C. S.
Harrison Gas Coal Co. Streets Run, .....	Allegheny, .....	.....	.....	Wm. L. Nancarrow	Hope Church, .....	P. R. R.
W. S. B. Hays. Calhoun, .....	Allegheny, .....	L. O. Hays, .....	Homestead, .....	L. O. Hays, .....	Homestead, .....	.....
G. W. Kramer. Bellwood, .....	Allegheny, .....	George W. Kramer, .....	Homestead, .....	.....	.....	.....
Wehman Bros. Wehman, .....	Allegheny, .....	Jacob Wehman, .....	Wilkinsburg, .....	Jacob Wehman, ....	Wilkinsburg, .....	.....
G. Vogele. Ocean, .....	Allegheny, .....	G. Vogele, .....	Station D, Pittsb'g.	G. Vogele, .....	Station D, Pittsb'g.	.....
Mount Oliver Coal and Stone Co. Rankin, .....	Allegheny, .....	G. H. Rankin, .....	Pittsburg, .....	.....	.....	.....



TABLE II—Continued.

Names of Operators and Collieries.		County.		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Railway.	Washington.	59,425	2,333	1,889	93,647	128½	178	1	1	1	400	70	17	
Pan Handle.	Allegheny.	72,499	1,065	314	76,445	139¾	122	1	2	1	400	75	12	
Essen No. 1.	Allegheny.	109,669	3,040	314	162,865	213¼	167	1	4	1	500	15½	12	
Harrison.	Allegheny.	109,669	3,040	1,263	153,364	269½	175	1	1	1	320	200	9	
Lake Superior.	Allegheny.	48,814	1,314	215	96,313	142½	142	1	1	1	320	200	9	
O. L. Co.	Allegheny.	48,814	1,314	215	96,313	142½	142	1	1	1	320	200	9	
Essen No. 2.	Allegheny.	162,924	1,693	140	164,254	188¼	154	1	1	1	320	200	9	
Essen No. 3.	Allegheny.	46,741	2,337	84	49,252	119½	74	1	1	1	320	200	9	
Federal No. 2.	Allegheny.	64,422	2,036	110	66,468	176½	79	1	1	1	320	200	9	
Dickson.	Allegheny.	129,688	3,314	556	133,568	199½	134	1	1	1	216	50	6	
Martinsburg.	Allegheny.	94,023	1,68	408	91,569	261½	127	1	1	1	800	50	18	
Marshall.	Allegheny.	148,466	1,974	448	170,888	216¼	152	1	1	1	800	50	18	
Hartley & Marshall.	Allegheny.	115,215	2,318	1,019	178,552	251¾	224	1	1	1	800	50	18	
Harlow Haven.	Allegheny.	144,118	4,286	329	148,924	284	171	1	1	1	469	200	13	
Lick Run.	Allegheny.	47,421	245	634	48,310	158½	122	1	1	1	469	200	13	
Total.		3,175,381	33,297	23,049	5,289,628	202.44	6,706	26	54	12,549	2,408	582		
New York and Cleveland Gas Coal Co.														
Oak Hill No. 4.	Allegheny.	247,264	2,124	825	370,253	285¾	378	1	1	1	.....	.....	27	
Oak Hill No. 5.	Allegheny.	291,721	717	82	364,410	509½	302	.....	.....	.....	.....	.....	16	
Loquess.	Allegheny.	131,997	769	744	133,440	282½	213	.....	.....	.....	.....	.....	17	
Total.		769,982	3,610	1,591	775,163	289.4	893	1	2	.....	.....	.....	60	
Monongahela River C. C. & C. Co.														
Becks Run.	Allegheny.	119,359	1,775	949	152,023	189	276	1	.....	.....	.....	2	17	
Watson.	Allegheny.	201,633	1,445	345	246,473	255	245	.....	.....	.....	.....	200	23	
Hays Street Run.	Allegheny.	160,182	419	82	160,674	198	264	.....	.....	.....	.....	400	18	
Total.		511,171	3,570	1,456	519,170	213	785	1	1	.....	.....	0.2	58	

## Recapitulation.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.										Number of tons used for steam and heat at colliery.	Sold to local trade and used by employee—tons.	Total production of coal in tons.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Pittsburgh Coal Co.,	Allegheny	5,173,381	93,267	23,040	5,283,628	28.44	6,766	26	54	12,549	240	582									
New York and Cleveland Gas Coal Co.,	Allegheny	769,982	3,610	1,791	775,163	27.4	893	1	2			60									
Monongahela River C. C. & C. Co.,	Allegheny	514,174	3,570	1,426	519,170	213	783	1	2			602									
Midland Coal Co.,	Washington	212,085	3,000	400	205,485	210	210														
Mansfield Coal and Coke Co.,	Allegheny	440,634	2,200	1,400	443,634	276½	396														
Pittsburgh and Buffalo Co.,	Washington	168,643	2,000	1,031	171,674	290	254														
Meadow Lands Coal Co.,	Washington	35,748	75	25	35,848	91¾	100														
J. V. H. Cook & Sons,	Washington	23,267	243	91	23,601	120	47														
Anyville-Youghiogheny Gas Coal Co.,	Allegheny	26,530	690	200	27,330	53	53														
Pan Handle Mining Co.,	Allegheny	53,383	724		54,307	241¾	230	1	2												
Marietta Coal Co.,	Allegheny	184,600	1,800		185,899	249¾	108														
Manickick Coal Co.,	Allegheny	70,000		100	70,000	121	170		1												
Shaw Coal and Coke Co.,	Washington	33,518	50		33,668	64	26														
Vernon Coal and Coke Co.,	Washington	3,766			3,766	64	26														
Bulker Block Coal Co.,	Washington	17,400	200		16,000	234	42														
Charters Coal and Coke Co.,	Allegheny	109,366	878		110,244	262	149			50											
Witch Hazel Coal Co.,	Allegheny				110,244	151	149		2												
P. F. Hornel,	Allegheny	11,648		41	11,693	151	38														
Thomas Fox Estate,	Allegheny		119	10,890	11,009	161	19														
Pittsburgh and Castle Shannon Railroad Co.,	Allegheny			111,010	111,010	280½	131		2												
Harrison Gas Coal Co.,	Allegheny	55,522	1,016	165	56,703	301¾	61														
W. S. E. Hays,	Allegheny			9,228	8,555	212	14														
G. W. Kramer,	Allegheny		50	15,000	15,050	297	28														
Wehman Bros.,	Allegheny			15,842	15,842	267	26														
G. Vogel,	Allegheny		19	6,707	6,726	288	22														
Mount Oliver Coal and Stone Co.,	Allegheny		300	7,700	8,000	282	19														
Total,		7,907,827	113,661	205,890	8,226,705	*231.9	10,758	35	73	13,593	2,583	863									

\*Average.

TABLE II--Continued.

Names of Operators.	County.	Number of Boilers.			Total horse power.			Locomotives.			Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute--gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Horse power.	Tubular.	Horse power.	Total horse power.		Steam.	Air.	Electric.						
Pittsburg Coal Co., .....	Allegheny & Wash.	19	798	121	13,238	14,036	2	2	23	122	13,566	58	11,064	9,039	28	25
New York and Cleveland Gas Coal Co., .....	Allegheny	2	200	5	375	200	2	5	1	7	310	3	600	390	1	
Monongahela River C. C. & Co. Co., .....	Allegheny	5	280	5	375	725	2	2	1	4	200	3	600	390	1	
Midland Coal Co., .....	Washington			3	375	375				7	150	3	350	100	2	2
Mansfield Coal and Coke Co., .....	Allegheny			3	375	375	1	1	2	6	1,100	1	350	100	2	
Pittsburg and Buffalo Co., .....	Washington			4	600	600			3	6	666	1	600	100	2	
Meadow Larks Coal Co., .....	Washington			1	100	100				2	100	1	60	20	1	1
J. V. H. Cook & Sons, .....	Washington			1	125	125				1	100	1	60	20	1	1
Pmyville-Youghiogheny Gas Coal Co., .....	Allegheny			2	250	250				2	250	1	80	10	1	
San Ramon Mining Co., .....	Allegheny			2	250	250				2	250	1	80	10	1	
Manickie Coal Co., .....	Allegheny			2	200	200			1	2	300	2	1	1	1	
Shaw Coal Co., .....	Washington			1	100	100	2	2		1	100					
Vernon Coal and Coke Co., .....	Washington			2	300	300				3	100	2			1	1
Bulker Block Coal Co., .....	Washington			2	300	300				3	100	1			1	1
Chartiers Coal and Coke Co., .....	Allegheny			1	125	340				2	250	1	200		1	1
Witch Hazel Coal Co., .....	Allegheny			1	125	340				2	250	1	200		1	1
P. F. Hornel, .....	Allegheny			1	125	340				2	250	1	200		1	1
Thomas Fox Estate, .....	Allegheny			1	50	50				2	40	2	80	80		
Pittsburg and Castle Shannon R. R. Co., .....	Allegheny			1	50	50				2	40	2	80	80		
Harrison Gas Coal Co., .....	Allegheny			1	60	60				1	60	1	90	90		
R. B. Hays, .....	Allegheny			1	60	60				1	60	1	90	90		
G. W. Kramer, .....	Allegheny			1	60	60				1	60	1	90	90		
W. W. Bros., .....	Allegheny			1	60	60				1	60	1	90	90		
G. Vugale, .....	Allegheny			1	50	50				1	50	1				
Mount Oliver Coal and Stone Co., .....	Allegheny			1	50	50				1	50	1				
Total, .....		30	1,653	151	16,533	18,186	13	2	30	167	17,931	80	12,224	9,039	37	20



TABLE III—Showing the number of each class or employees at each colliery in the Seventh Bituminous District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.						Grand total, inside and outside.
		Total inside.										Total outside.						
		Inside foremen or mine bosses.	Pit bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Outside foremen.	Blacksmiths and carpenters.	In teams and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.				
Pittsburg Coal Co.																		
Meon Run, .....	Allegheny, .....	1	3	349	...	22	4	39	1	9	1	2	...	45	66	484		
First Pool No. 1, .....	Allegheny, .....	1	2	265	5	23	4	13	3	1	3	1	...	29	52	365		
First Pool No. 2, .....	Allegheny, .....	1	1	190	10	20	3	21	1	1	1	1	...	11	18	285		
Jumbo, .....	Washington, .....	1	1	250	4	29	3	30	1	1	1	1	...	24	44	354		
Brier Hill, .....	Washington, .....	1	1	150	...	14	3	14	1	1	1	1	...	8	15	206		
Nickel Plate, .....	Allegheny, .....	1	1	105	...	14	1	8	1	1	1	1	...	16	15	145		
Laurel Hill No. 1, .....	Allegheny, .....	1	4	140	...	18	4	32	1	1	1	1	...	15	29	238		
Laurel Hill No. 2, .....	Washington, .....	1	1	132	9	17	3	21	1	1	1	1	...	10	26	200		
Champion, .....	Allegheny, .....	1	1	50	...	7	...	...	1	1	1	1	...	3	75	75		
National, .....	Allegheny, .....	1	1	80	...	6	...	...	...	1	1	1	...	5	10	71		
Oak Ridge, .....	Allegheny, .....	1	1	55	...	7	1	4	...	1	1	1	...	10	15	95		
Cherry, .....	Allegheny, .....	1	1	68	...	8	...	...	...	1	1	1	...	5	11	109		
Boyd, .....	Allegheny, .....	1	1	100	...	9	2	5	...	1	1	1	...	9	15	132		
Fort Pitt, .....	Allegheny, .....	1	1	20	...	3	...	...	1	1	1	1	...	10	19	175		
Clark, .....	Allegheny, .....	1	3	130	...	16	...	6	1	1	1	1	...	6	17	151		
Nixon, .....	Allegheny, .....	1	1	80	...	10	...	2	1	1	1	1	...	10	12	107		
Leasdale, .....	Allegheny, .....	1	1	140	...	17	1	2	1	1	1	1	...	6	17	151		
Summer Hill, .....	Allegheny, .....	1	1	90	...	9	...	7	1	1	1	1	...	10	20	189		
Bower Hill, .....	Allegheny, .....	1	1	120	...	14	...	7	1	1	1	1	...	9	18	192		
Bridgeville, .....	Allegheny, .....	1	2	12	3	2	...	...	...	1	1	1	...	7	13	116		
Slope, .....	Allegheny, .....	1	1	85	...	11	2	3	...	1	1	1	...	7	10	187		
Boon, .....	Washington, .....	1	1	160	...	13	...	...	...	1	1	1	...	9	15	158		
Allison, .....	Washington, .....	1	1	113	...	13	4	8	...	1	1	1	...	14	24	230		
Morgan, .....	Allegheny, .....	1	1	142	16	17	4	8	...	1	1	1	...	14	24	230		
Vulcan, .....	Allegheny, .....	1	2	130	...	17	7	34	...	1	1	1	...	1	22	213		
Laurel Hill No. 5, .....	Allegheny, .....	1	2	130	...	17	7	34	...	1	1	1	...	1	22	213		

TABLE III.—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.	
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.		Total outside.
Creedmore.	Washington.	1	1	140	.....	12	15	13	173	.....	4	5	.....	1	8	19	192
Ridgeway.	Washington.	1	1	100	.....	15	10	13	146	.....	7	6	.....	1	18	32	178
Pan Handle.	Allegheny.	1	1	89	.....	10	1	14	107	.....	4	3	.....	2	7	15	122
Essen No. 1.	Allegheny.	1	1	130	.....	13	1	9	152	.....	4	3	.....	1	7	15	167
Essen No. 2.	Allegheny.	1	1	132	.....	8	1	9	154	.....	4	4	.....	1	10	19	173
Harrison.	Allegheny.	1	2	102	.....	8	1	7	125	.....	4	2	.....	1	12	17	142
Lake Superior.	Allegheny.	1	1	70	.....	6	1	4	81	.....	1	.....	.....	.....	2	3	84
O. I. C.	Allegheny.	1	2	108	.....	14	1	4	134	.....	1	4	.....	1	19	23	157
Essen No. 3.	Allegheny.	1	1	50	.....	4	1	.....	65	.....	1	4	.....	4	.....	9	74
Essen No. 2.	Allegheny.	1	1	60	.....	8	.....	2	76	.....	3	.....	.....	.....	.....	3	79
Federal No. 2.	Allegheny.	1	.....	80	.....	15	.....	13	111	.....	3	4	.....	2	14	23	134
Dickson.	Allegheny.	1	.....	82	.....	12	.....	13	111	.....	.....	.....	.....	1	12	16	127
Margenau.	Allegheny.	1	.....	99	.....	18	.....	12	135	.....	.....	3	.....	1	9	17	152
Partridge.	Allegheny.	1	3	175	.....	13	2	9	203	.....	.....	.....	.....	2	12	24	221
Hartley & Marshall.	Allegheny.	1	1	88	.....	4	1	1	100	.....	1	.....	.....	1	12	22	111
Fair Haven.	Allegheny.	1	1	82	.....	8	3	3	100	.....	2	6	.....	1	16	22	122
Lick Run.	Allegheny.	1	1	82	.....	8	3	3	100	.....	2	6	.....	1	16	22	122
Total.	.....	42	57	4,706	61	532	96	412	5,969	17	135	148	8	53	436	797	6,766
New York and Cleveland Gas Coal Co.	Allegheny.	1	.....	287	9	23	10	.....	330	.....	3	12	.....	.....	38	48	378
Oak Hill No. 4.	Allegheny.	1	1	257	10	12	7	.....	287	.....	.....	.....	.....	.....	9	15	302
Oak Hill No. 3.	Allegheny.	1	.....	167	10	8	4	.....	190	.....	4	.....	.....	.....	15	23	213
Duquesne.	Allegheny.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.	.....	3	.....	711	39	43	21	.....	807	.....	1	11	.....	6	62	86	893

Monongahela River C. C. & C Co.														
Becks Run, .....	1	1	208	.....	15	.....	1	10	.....	5	.....	4	.....	237
Walton, .....	1	2	190	.....	15	.....	1	9	.....	3	.....	5	.....	220
Hays Street Run, .....	2	.....	137	.....	11	.....	4	16	.....	4	.....	2	.....	230
Total, .....	4	3	535	.....	41	.....	6	35	.....	10	.....	11	.....	687
Midland Coal Co.														
Midland, .....	1	.....	260	.....	6	.....	19	2	.....	1	.....	3	.....	288
Mansfield Coal and Coke Co.														
Mansfield No. 2, .....	1	4	235	.....	14	.....	1	47	.....	13	.....	3	.....	362
Pittsburg and Buffalo Co.														
Hazel, .....	1	2	162	.....	18	.....	.....	23	.....	1	.....	6	.....	221
Meadow Lands Coal Co.														
Meadow Lands, .....	1	.....	75	.....	5	.....	.....	5	.....	2	.....	2	.....	86
J. V. H. Cook & Sons.														
Rich Hill, .....	1	.....	35	.....	1	.....	2	.....	3	.....	1	.....	1	42
Amyville-Youghiogheny Gas Coal Co.														
Katie, .....	1	.....	30	.....	1	.....	7	2	.....	1	.....	1	.....	45
Pan Handle Mining Co.														
Blyth, .....	1	.....	35	.....	1	.....	3	1	.....	1	.....	1	.....	44
Carnegie Coal Co.														
Carnegie, .....	1	1	185	.....	10	.....	3	5	.....	205	.....	1	.....	205
Verner Coal and Coke Co.														
Verner, .....	1	1	15	.....	1	.....	.....	.....	.....	18	.....	1	.....	18
Shaw Coal Co.														
Shaw No. 1, .....	1	1	139	.....	9	.....	5	3	.....	119	.....	1	.....	139
Bulger Block Coal Co.														
Bulger, .....	1	.....	30	.....	2	.....	.....	2	.....	3	.....	1	.....	35
Charliers Coal and Coke Co.														
Hickman, .....	1	.....	26	.....	2	.....	1	.....	.....	24	.....	.....	.....	24
Witch Hazel Coal Co.														
Witch Hazel, .....	1	1	125	.....	1	.....	7	1	.....	136	.....	1	.....	136
P. F. Hormel.														
Beachmont, .....	1	.....	22	.....	2	.....	1	1	.....	27	.....	1	.....	27
Thomas Fox Estate.														
Fox, .....	1	.....	15	.....	1	.....	.....	.....	.....	17	.....	1	.....	17

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.								Occupations of Persons Employed Outside.							Grand total, inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Iron menders and firemen.	Millers.	Superintendents, bookkeepers and clerks.	All other employees.	Total outside.	
P. & C. S. R. R. Co.	Allegheny.....	1		110	4	9			124	1					9	10	134
Castle Shannon	Allegheny.....	1		48	1	3	1	1	55		1	1		1	3	6	61
Harrison Gas Coal Co.	Allegheny.....																
Streets Run	Allegheny.....																
W. S. B. Hays.	Allegheny.....	1		8		1		1	11					2	1	3	14
Cathoon	Allegheny.....																
G. W. Kramer.	Allegheny.....	1		29		1		1	23			1		1	3	5	28
Bellwood	Allegheny.....																
Weinman	Allegheny.....	1		23		2			26								26
Weinman Bros.	Allegheny.....																
G. Vogele.	Allegheny.....	1		10		1			12	1				2	7	10	22
Ocean	Allegheny.....																
Mount Oliver Coal and Stone Co.	Allegheny.....			15		2			17			1			1	2	19
Rankin	Allegheny.....																
Pine Ridge	Allegheny.....	1		90		6		3	100		1			2	5	8	108
Mankedick Coal Co.	Allegheny.....																
Grand total.		71	70	7,830	123	746	143	547	9,530	26	191	206	12	96	697	1,228	10,758

## Recapitulation.

Names of Operators.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside and outside.	
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employees.		Total outside.
Pittsburg Coal Co.,	Allegheny & Wash.	42	57	4,768	64	322	96	412	5,969	17	135	148	8	53	436	797	6,766
New York and Cleveland Gas Coal Co.,	Allegheny,	3	3	711	29	44	21	...	807	...	7	11	...	6	62	86	883
Monongahela River C. C. & C. Co.,	Allegheny,	4	3	595	...	43	6	35	687	...	10	11	...	6	71	98	785
Midland Coal Co.,	Washington,	1	4	260	6	19	2	...	288	1	3	4	3	1	10	22	310
Pennsylv. Coal and Coke Co.,	Allegheny,	1	2	265	15	14	1	47	362	...	13	8	...	2	16	34	316
Witch Hazel Coal Co.,	Washington,	1	...	162	...	18	...	23	221	1	6	...	...	...	19	33	254
Meadow Lands Coal Co.,	Washington,	1	...	35	...	6	...	5	86	...	2	...	...	2	8	14	100
J. V. H. Cook & Sons,	Allegheny,	1	...	30	1	...	...	42	42	...	1	...	...	1	3	5	47
Amyville-Youghiogheny Gas Coal Co.,	Allegheny,	1	...	35	1	...	...	1	44	...	1	...	...	1	3	5	47
Pan Handle Mining Co.,	Allegheny,	1	1	185	...	...	...	5	265	1	1	...	...	1	4	9	83
Carnegie Coal Co.,	Allegheny,	1	1	90	...	6	...	3	104	...	1	...	...	2	16	23	280
Mankelick Coal Co.,	Allegheny,	1	1	139	...	9	5	3	149	1	2	...	...	2	10	26	168
Vernon Coal and Coke Co.,	Washington,	1	1	15	...	1	...	...	18	...	1	...	...	1	3	7	42
Belcher Block Coal Co.,	Washington,	1	1	30	...	2	...	2	35	...	1	...	...	1	3	7	42
Charliers Coal and Coke Co.,	Allegheny,	1	1	125	1	7	1	1	24	...	1	...	...	1	1	1	25
Witch Hazel Coal Co.,	Allegheny,	1	1	22	...	1	...	...	136	1	2	3	1	1	5	13	149
Thomas Fox Estate,	Allegheny,	1	...	15	...	2	...	...	27	1	...	...	...	...	...	1	28
P. & C. S. R. N. Co.,	Allegheny,	1	...	116	4	9	...	...	17	1	...	1	...	...	9	10	134
Harrison Gas Coal Co.,	Allegheny,	1	...	48	1	3	1	1	55	...	1	1	...	1	3	6	61
W. S. R. Hays,	Allegheny,	1	...	29	...	...	...	1	11	...	1	...	...	2	1	3	14
G. W. Kramer,	Allegheny,	1	...	23	...	2	...	1	23	...	...	1	...	1	3	5	28
Wehman Bros.,	Allegheny,	1	...	10	...	...	...	...	26	...	...	...	...	2	7	10	26
G. Voegelé,	Allegheny,	1	...	15	...	2	...	...	17	1	...	1	...	...	1	2	22
Mount Oliver Coal and Stone Co.,	Allegheny,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
Total,		71	70	7,830	123	746	143	547	9,530	26	191	206	12	96	697	1,228	10,758



TABLE III.—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Pittsburg Coal Co.,	Allegheny & Wash.	15.65	14.26	14.05	15.89	18.29	18.54	21.03	21.23	19.41	22.41	19.22	15.96	208
New York and Cleveland Gas Coal Co.,	Allegheny,	19.16	17.41	19.66	22.41	29.75	21.33	21.75	25.58	23.16	26.08	23.88	23.08	271½
Monongahela River C. C. & C. Co.,	Allegheny,	20.15	15.15	20.33	21.5	24.33	21.33	22.25	25	17.5	20.33	14.5	20	214
Washington Coal Co.,	Washington,	18.5	16.5	14	16.5	25.5	21.5	22.25	15.75	14.5	13.25	13.5	15.25	210
Midland Coal Co.,	Allegheny,	18.5	21.75	19	23.5	24.5	24.5	25	25	22.5	27	25	22.25	276.50
Pittsburg and Buffalo Co.,	Washington,	24.75	22	26	24.5	24½	25	24½	23	23	24½	23½	24½	290
Meadow Larks Coal Co.,	Washington,						7	5½	12½	12	18½	18½	16½	94.75
J. V. H. Cook & Sons,	Washington,			11	13	15	14	15	11	11	11	10	9	130
Amyville-Yaughiebheny Gas Coal Co.,	Allegheny,	25	25	25	25	25	25	25	25	26	24	25	25	300
Pan Handle Mining Co.,	Allegheny,	22	19	22	22	25	18½	21½	17	18½	22½	15½	18½	241.75
Carnegie Coal Co.,	Allegheny,	19½	18	29	15	22½	21	21½	24½	22½	23½	19	19½	249.75
Mankedok Coal Co.,	Allegheny,	25½	23½	21	24½	19½	21	19	24	20½	22	20	16	256.25
Shaw Coal Co.,	Washington,						3	20	18	22	19	17	22	121
Verner Coal and Coke Co.,	Washington,													94
Bulser Block Coal Co.,	Washington,	49	55	15	18	24	23	32	24	24	25	17	20	262
Hartlers Coal and Coke Co.,	Allegheny,	16	22	22	22	24	20	22	20	20	27	24	15	248
W. F. Hazen,	Allegheny,						25	25	29	18	18	16	20	177
P. & C. S. R. Co.,	Allegheny,	32	21	27	13	21	6	5	6	11	15	13	15	161
Thomas Fox Estate,	Allegheny,													250.50
Harrison Gas Coal Co.,	Allegheny,	24½	25	25	23	21	20	20½	29½	23	27	26	25	312
W. S. B. Hays,	Allegheny,	27	24	25½	24	24½	24½	24½	29½	27	27	26	25	317.75
G. W. Kramer,	Allegheny,	25	24	25	26	27	24	25	27	23	25	25	25	297
Weinman Bros.,	Allegheny,	26	24	25	19	11	22	16	26	21	25	25	25	297
G. Voelz,	Allegheny,	26	23	26	25	26	25	20	19	24	25	24	25	288
Mount Oliver Coal and Stone Co.,	Allegheny,	25	23	25	24	23	24	20	20	24	25	25	24	282

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Seventh Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 5	Wm. Bently, .....	American, ..	Miner, .....	57	M.	1	....	Mansfield No. 2, .....	Allegheny,	Fatally injured by fall of slate in his room; he was taking the loose slate down and it fell upon him.
Feb. 7	Frank Maclevish, .....	Pole, .....	Miner, .....	33	M.	1	2	Mansfield No. 2, .....	Allegheny,	Fatally injured by fall of slate in his room; he was taking down coal and a piece of slate broke away from a free slip and fell upon him.
8	Patrick Dinnan, .....	Irish, .....	Miner, .....	49	M.	1	5	Witch Hazel, .....	Allegheny,	Killed by being struck by a car which broke away from the trip and ran back over the tracks.
March 6	Frank Ayers, .....	American, ..	Miner boy, .....	15	....	....	....	Niukel Plate, .....	Allegheny,	Killed by fall of slate in a room; he was working with his father who knew the slate was unsafe.
20	Wm. Wherling, .....	German, ....	Driver, .....	57	M.	1	....	Becks Run, .....	Allegheny,	Killed on the main parting; it is supposed the mule backed against him and crushed his body against the car, breaking his back; no one saw the accident.
April 19	Paul Speicher, .....	American, ..	Miner boy, .....	15	....	....	....	Nixon, .....	Allegheny,	Killed by fall of slate these persons, father and son, were working in a room; a piece of slate broke away from a free slip and fell upon them.
19	Jacob Speicher, .....	German, ....	Miner, .....	59	M.	1	4	Nixon, .....	Allegheny,	Both men were working in a room; the mule broke away from a free slip and fell upon them.
May 7	Jacob Annon, .....	German, ....	Miner, .....	53	S.	....	....	Castle Shannon, .....	Allegheny,	Killed by fall of coal in his room; the coal broke over a sprag to a clay seam; and fell upon him while he was undressing.
18	Joseph Daniel, .....	Russian, ....	Miner, ....	38	S.	....	....	Cherry, .....	Allegheny,	Killed by fall of slate in his room; he neglected to set props.
24	Peter Sabavah, .....	Pole, .....	Miner, .....	32	M.	1	4	Hazel, .....	Wash'ton,	Killed by electric shock; he came in contact with an electric wire on side of passageway.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
June	5 Enoch Newman, .....	English, ....	Miner, .....	57	S.	.....	.....	Hartley & Marshall, .....	Allegheny.	Killed by fall of slate in his room; the slate broke away from a free slip which could not be seen.
7	George Popeck, .....	Austrian, ...	Miner, .....	43	M.	1	4	Carnegie, .....	Allegheny.	Killed by electric shock; he came in contact with an electric wire on side of passageway.
18	Abraham Douglas, ....	American, ..	Miner boy, ....	14	.....	.....	.....	Oak Hill No. 4, .....	Allegheny.	Killed by fall of coal in a room; he was working with his father, who failed to set sprags to the coal while underground.
19	Paul Sabulsky, .....	Russian, ....	Machine runner	26	S.	.....	.....	Vulcan, .....	Allegheny.	Killed by mining machine; he was caught by cutting and his body drawn into the machinery.
July	15 Domie Mart, .....	Italian, ....	Miner, .....	55	M.	1	.....	Allison, .....	Wash'ton.	Killed by fall of slate in his room; the slate that fell was encircled by a free slip which could not be seen.
16	Paul Valentine, .....	Italian, ....	Miner, .....	35	S.	.....	.....	Essen No. 1, .....	Allegheny.	Killed by fall of coal and slate in his room; he was undermining under a piece of loose coal and slate that he should have taken down.
19	Wm. Kaminski, .....	Pole, .....	Miner, .....	48	M.	1	3	Hazel, .....	Wash'ton.	Killed by fall of coal at face of an entry; he had fired a blast in the coal and was loading a car in front of the broken coal when it fell upon him.
23	Henry Halley, .....	Irish, .....	Miner, .....	18	S.	.....	.....	Jumbo, .....	Wash'ton.	Killed by fall of slate in a room. He knew the slate was unsafe, but risked his life to get the props.
31	Joseph Maliek, .....	Slav, .....	Hooker on, ....	39	M.	1	1	Essen No. 2, .....	Allegheny.	Killed by being struck by car which broke loose from trip and ran back down the slope.
Aug.	5 Henry A. Jacobs, .....	American, ...	Driver, .....	21	S.	.....	.....	Lake Superior, .....	Allegheny.	Fatally injured by being crushed between car and coal pillar; he was riding on front end of the car which ran against the side of passageway.

14	Martin Shimnetzer, ...	German, ....	Miner, .....	34	M.	1	4	Harrison, .....	Allegheny, .....	Killed by fall of slate in his room; he failed to set a sufficient number of props.
Sept. 16	Joseph Ritter, .....	German, ....	Miner, .....	54	S.	.....	.....	Morgan, .....	Allegheny, .....	Fatally injured by fall of slate in his room; he was working under a piece of loose slate which he should have killed by fall of slate in his room; he had driven a wedge over the loose slate, intending to take it down, and then went under it to work without setting props.
23	Leon Horner, .....	French, ....	Miner, .....	19	S.	.....	.....	Nickel Plate, .....	Allegheny, .....	Killed by fall of slate in his room; he had driven a wedge over the loose slate, intending to take it down, and then went under it to work without setting props.
26	Dominick Long, .....	Italian, ....	Miner, .....	25	S.	.....	.....	Partridge, .....	Allegheny, .....	Killed by fall of slate in his room; he was working under a piece of dangerous slate, and lost his life by failing to set props.
Oct. 10	George Schnkovich, ...	Pole, .....	Miner, .....	40	S.	.....	.....	Champion, .....	Allegheny, .....	Killed by fall of slate at face of his room; he had been warned of his danger by another miner.
22	Mathew Schinkotz, ...	Slav, .....	Miner, .....	42	M.	1	5	Lick Run, .....	Allegheny, .....	Killed by fall of coal in his room; he had fired a blast in the coal and went deeper, but did not set sprags, which determined it.
29	Thomas Mavercheck, ...	Austrian, ...	Miner, .....	44	M.	1	.....	O. I. C., .....	Allegheny, .....	Killed by fall of slate in his room; the danger could easily have been seen and the loose slate should have been taken down, as it could not have been propped with safety.
Nov. 7	Wm. J. Casey, .....	American, ...	Motor man, ....	30	S.	.....	.....	Nixon, .....	Allegheny, .....	Killed in a wreck on motor road. These two men were riding on the electric motor coming from the mine with a loaded trip. The motor collided with cars lost from a trip when going into the mine. The motorman was at fault in not giving proper attention to the signal carried in on the last car, and the motorman was not intelligent in not enforcing strict discipline on the motor roads.
7	Thomas Carmichael, ...	American, ...	Road man, ....	51	M.	1	.....	Nixon, .....	Allegheny, .....	
20	Nickolas Kretch, .....	American, ...	Miner, .....	20	S.	.....	.....	Fair Haven, .....	Allegheny, .....	Killed by fall of roof in a room pillar; he was taking props out and removed the wrong props, and then went under the unsupported roof to remove the props, which should have been taken out first.
20	Nickolas Balack, .....	Italian, ....	Miner, .....	34	M.	1	1	Pan Handle, .....	Allegheny, .....	Killed by fall of roof; he was taking out props in pillar workings and first removed the ones nearest the coal face which left no safe way of retreat while removing the back props.
25	John Beachaj, .....	Austrian, ...	Miner, .....	28	S.	.....	.....	First Pool No. 1, .....	Allegheny, .....	Fatally injured by fall of slate in his room; he was working under a small piece of loose slate that he should have taken down.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
25	G. Joice, .....	Italian, ....	Miner, .....	22	M.	1	2	Margerum, .....	Allegheny.	Partially injured by fall of slate in his room; the danger could have been detected and guarded against by ordinary care.
Dec. 12	John Phillips, .....	Slav, .....	Miner, .....	28	S.	.....	.....	Creedmoor, .....	Wash'ton, ..	Killed by fall of horse-back roof in his room; the roof was treacherous and full of slips, but if the victim had exercised proper care the accident could have been averted.
17	Joseph Davis, .....	English, ....	Driver, .....	17	S.	.....	.....	Dover Hill, .....	Allegheny.	Killed by fall of slate in a room; he was standing coal and had set props, but the slate broke away from a free clay slip, throwing the props out.



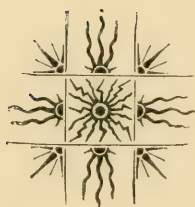
TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Seventh Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 3	Antoniu Vindaney, .....	Slav, .....	Miner, .....	57	W.	Ridgeway, .....	Washington, ..	Leg broke by falling slate.
4	Samuel Maze, .....	American, ....	Weighman, ....	26	S.	Hazel, .....	Washington, ..	Leg crushed, necessitating amputation; he attempted to get on car while it was in motion.
5	Adam Wilds, .....	American, ....	Miner, .....	18	S.	Cherry, .....	Allegheny, ....	Back bruised and hip dislocated by falling slate.
12	Emil Parue, .....	French, .....	Miner, .....	49	S.	Champion, .....	Allegheny, ....	Thigh broken by fall of slate.
22	Wm. G. Miller, .....	English, .....	Miner, .....	23	S.	Essen No. 1, .....	Allegheny, ....	Back injured by fall of slate.
23	Matthew Smith, .....	English, .....	Miner, .....	30	M.	Castle Shannon, .....	Allegheny, ....	Leg broken by fall of slate.
24	James Scanlon, .....	American, ....	Driver, .....	39	M.	Witch Hazel, .....	Allegheny, ....	Injured by rock from a premature blast.
30	Wm. Clark, .....	Scotch, .....	Miner, .....	17	S.	Duquesne, .....	Allegheny, ....	Gruised about body by a fall of coal.
Feb. 14	Harry Sheppard, .....	American, ....	Miner, .....	29	M.	Hazel, .....	Washington, ..	Foot crushed, necessitating amputation; caught in mining machine.
March 4	Morris Cantaral, .....	French, .....	Machine runner	26	S.	Midland No. 1, .....	Washington, ..	Arm fractured and leg injured by fall of roof.
11	Paul Prytzatulla, .....	Pole, .....	Driver, .....	22	S.	Boyd, .....	Allegheny, ....	Foot injured by fall of slate.
11	L. Breton, .....	English, .....	Miner, .....	50	S.	Ryth, .....	Allegheny, ....	Foot injured by fall of roof.
25	Michael Olek, .....	Pole, .....	Miner, .....	42	M.	Nixon, .....	Allegheny, ....	Substantially injured by gas explosion.
27	Chas. Silver, .....	Pole, .....	Miner, .....	19	S.	Nixon, .....	Allegheny, ....	Slightly burned by gas explosion. A roof fall occurred on roadway of their room; they went into the room over the fall with an open light.
27	Mike Savastogs, .....	Pole, .....	Miner, .....	45	M.	Nixon, .....	Allegheny, ....	They went into the room over the fall with an open light.
28	Daniel Morgan, .....	Irish, .....	Laborer, .....	55	M.	Laurel Hill No. 2, .....	Washington, ..	Back injured by fall of rock.
April 10	Frank Marzyweco, .....	Italian, .....	Miner, .....	22	M.	Essen No. 1, .....	Allegheny, ....	Hip dislocated by fall of coal.
21	Michael Augustine, .....	American, ....	Driver, .....	38	M.	Castle Shannon, .....	Washington, ..	Arm and hip broken; fell in front of cars.
29	George Young, .....	English, .....	Miner, .....	59	M.	Boon, .....	Washington, ..	Collar bone broken by fall of slate.
29	Joseph Sewich, .....	Hungarian, ....	Miner, .....	40	M.	Morgan, .....	Allegheny, ....	Foot injured by fall of coal.
May 7	Philip Peters, .....	American, ....	Miner, .....	16	M.	Mansfield No. 2, .....	Allegheny, ....	Thigh bone fractured by fall of slate.
14	George Vertinski, .....	Slav, .....	Miner, .....	36	M.	First Pool No. 1, .....	Allegheny, ....	Bruised about back and hips by fall of slate.
14	James McNell, .....	Scotch, .....	Driver, .....	43	M.	Ryth, .....	Allegheny, ....	Head injured between car and prop.
16	Mike Petty, .....	Hungarian, ....	Miner, .....	35	M.	Vulcan, .....	Allegheny, ....	Leg broke by fall of coal.
22	Charles Peach, .....	American, ....	Miner, .....	38	M.	First Pool No. 1, .....	Allegheny, ....	Thigh broken and head injured by fall of slate.

TABLE V.—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
June	8 Peter Vedras, .....	Pole, .....	Miner, .....	18	S.	Champion, .....	Allegheny, .....	Seriously injured; he attempted to jump on cars and fell under them.
12	Wm. Knall, .....	American, .....	Trip Rider, .....	30	S.	Bridgeville, .....	Allegheny, .....	Hand injured between mine cars.
13	Smaley Steward, .....	American, .....	Machine runner, .....	23	S.	Pan Handle, .....	Allegheny, .....	Leg broken by fall of slate.
17	George Penate, .....	Italian, .....	Miner, .....	33	M.	Oak Hill No. 4, .....	Allegheny, .....	Back seriously injured by fall of slate.
29	Andrew Sieber, .....	German, .....	Miner, .....	45	M.	Bridgeville, .....	Allegheny, .....	Foot injured by fall of slate, necessitating amputation.
July	1 Mike Brino, .....	Austrian, .....	Machine helper, .....	28	M.	Partridge, .....	Allegheny, .....	One leg cut off and the other badly mangled by a running machine.
8	John Yarnus, .....	Pole, .....	Miner, .....	32	M.	Boyd, .....	Allegheny, .....	Thigh broken by fall of slate.
17	Max Federal, .....	Russian, .....	Miner, .....	35	M.	Pan Handle, .....	Allegheny, .....	Leg broken by fall of slate.
23	Barney Boyle, .....	American, .....	Miner, .....	49	M.	First Pool No. 2, .....	Allegheny, .....	Leg broken and back injured by fall of slate.
31	Weld Wildner, .....	German, .....	Miner, .....	45	S.	Leasdale, .....	Allegheny, .....	Back and leg injured by fall of slate.
1	W. J. Hurtman, .....	Scotch, .....	Driver, .....	21	S.	Vulcan, .....	Allegheny, .....	Collar bone broken by cars.
2	Peter Petty, .....	Hungarian, .....	Machine helper, .....	26	S.	Vulcan, .....	Allegheny, .....	Leg broken by fall of slate.
6	Antonio Cichon, .....	Italian, .....	Miner, .....	28	S.	Federal No. 2, .....	Allegheny, .....	Slightly injured by fall of slate.
7	Wm. McGlosky, .....	Hungarian, .....	Machine helper, .....	19	S.	First Pool No. 2, .....	Allegheny, .....	Thigh injured by fall of slate.
8	Stants Kilewski, .....	Pole, .....	Miner, .....	.....	S.	First Pool No. 2, .....	Allegheny, .....	Back injured by fall of slate.
12	Desire Paquet, .....	Belgian, .....	Machine runner, .....	41	M.	Creedmore, .....	Washington, .....	Burned by gas explosion. These two persons passed over a danger signal with open lights and ignited the gas.
13	Jules Paeaux, .....	Belgian, .....	Miner, .....	11	M.	Boyd, .....	Washington, .....	Severely injured between railroad car and triple.
13	Joseph Powell, .....	American, .....	Laborer, .....	22	S.	Boyd, .....	Allegheny, .....	Brain and entry.
14	James Phillips, .....	Welsh, .....	Driver, .....	31	S.	Boyd, .....	Allegheny, .....	Brain and entry.
19	George Rebo, .....	Slav, .....	Miner, .....	34	S.	O. I. C. ....	Allegheny, .....	Head and ankle injured by fall of slate.
26	Danist Fayssie, .....	American, .....	Driver, .....	17	S.	Federal No. 2, .....	Allegheny, .....	Arm broken between car and side of passageway.
Sept.	9 Fred. Clemens, .....	German, .....	Miner, .....	51	M.	Nixon, .....	Allegheny, .....	Head injured by fall of roof.
9	John Seifrey, .....	German, .....	Miner, .....	60	S.	Nixon, .....	Allegheny, .....	Back injured by fall of slate.
13	Walter Jones, .....	Welsh, .....	Driver, .....	26	S.	Lake Superior, .....	Allegheny, .....	Leg broken; struck by cars.
21	Joe Dandof, .....	Hungarian, ..	Miner, .....	33	S.	Laurel Hill No. 5, .....	Allegheny, .....	Thigh and nose broken by fall of coal and slate.
24	Ponder Jackman, .....	Italian, .....	Miner, .....	26	S.	Moon Run, .....	Allegheny, .....	Back injured by fall of slate in his room.

26	Oct.	August Houk, .....	German, .....	Miner, .....	30	M.	Champion, .....	Allegheny, .....	Leg broken; was struck by a dilly trip.
2		Joseph Huschel, .....	American, .....	Miner, .....	40	M.	Essen No. 2, .....	Allegheny, .....	Leg broken by fall of coal.
3		Charles Sanders, .....	American, .....	Miner, .....	32	S.	Leasdale, .....	Allegheny, .....	Leg broken and internal injury by fall of slate.
6		David Hammond, .....	American, .....	Engine man, .....	48	M.	Morgan, .....	Allegheny, .....	Hand injured in attempting to clean machinery while it was in motion.
11		William Schultz, .....	American, .....	Miner boy, .....	15	...	Fair Haven, .....	Allegheny, .....	Leg broken by fall of coal.
21		Martin Conley, .....	American, .....	Driver, .....	18	S.	Boyd, .....	Allegheny, .....	Hips injured between cars.
23		Parson Constante, .....	Italian, .....	Miner, .....	38	M.	Essen No. 1, .....	Allegheny, .....	Hand and arm injured by a car.
24		Lewis Winemus, .....	German, .....	Miner, .....	35	M.	Mansfield No. 2, .....	Allegheny, .....	Foot injured by fall of roof.
25		Edwin Thompson, .....	English, .....	Roadman, .....	69	M.	Boyd, .....	Allegheny, .....	Leg broken; struck by the hauling rope.
26	Nov.	Frank Melhorn, .....	Italian, .....	Miner, .....	21	S.	Witch Hazel, .....	Allegheny, .....	Foot injured by fall of slate.
6		Joseph Zibraski, .....	Pole, .....	Miner, .....	38	M.	Boyd, .....	Allegheny, .....	Hips and shoulders injured by fall of slate.
11		Lewis Dice, .....	American, .....	Roadman, .....	48	M.	Mansfield No. 2, .....	Allegheny, .....	Leg injured; struck by a post that he was taking out.
12		Thomas Brewer, .....	English, .....	Miner, .....	19	S.	Mansfield No. 2, .....	Allegheny, .....	Collar bone broken; he fell in front of a car.
26		William Steel, .....	Scotch, .....	Driver, .....	22	S.	Champion, .....	Allegheny, .....	Foot injured by cars.
26		Mike Cekosky, .....	Hunsarian, .....	Miner, .....	30	S.	First Pool No. 2, .....	Allegheny, .....	Back and leg injured by fall of slate.
29		Mike Rick, .....	Austrian, .....	Miner, .....	38	M.	Walton, .....	Allegheny, .....	Leg broken by fall of coal and slate.
3	Dec.	John Delfavero, .....	Italian, .....	Miner, .....	40	S.	Essen No. 1, .....	Allegheny, .....	Arm and side seriously injured by fall of slate.
6		John Vnath, .....	Slav, .....	Miner, .....	20	S.	Essen No. 3, .....	Allegheny, .....	Head injured by fall of slate.
9		Robert Binder, .....	German, .....	Miner, .....	36	M.	Shaw, .....	Washington, .....	Collar bone broken by fall of coal and slate.
14		Hays, .....	Irish, .....	Miner, .....	46	M.	Hazel, .....	Washington, .....	Hand injured between car and a prop.
16		John Campbell, .....	American, .....	Miner, .....	32	M.	Ewer Hill, .....	Allegheny, .....	Slightly burned by gas explosion; he went on top of a roof fall with an open light.
28		Peter Jamle, .....	Italian, .....	Miner, .....	32	M.	Midland No. 1, .....	Washington, .....	Head and shoulders injured by fall of coal.



# Eighth Bituminous District.

CLEARFIELD AND CENTRE COUNTIES.

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Philipsburg, Pa., February 8, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In compliance with the provisions of the act of Assembly approved May 5, 1893, I herewith submit my annual report of the inspection of mines in the Eighth Bituminous District, for the year ending December 31, 1901.

The report contains the usual statistical tables, giving number of employes in and about the mines, number of tons of coal produced and shipped by rail, sold to local trade, and used for steam and heat at the mines; also the number of fatal and non-fatal accidents.

It is very gratifying to report that the fatal accidents have been reduced to three as against nine in the preceding year, and while the number of tons mined in 1900 was 4,342,176 as against 3,385,284 tons in 1901, a decrease of 956,892 tons, the death rate was greatly reduced for the number of tons mined, being 482.464 tons per life lost during the year 1900, as against 1,128,428 tons during the year 1901. The number of non-fatal accidents was practically the same as for the year previous, I can only account for the decrease in loss of human life, from the fact of the miners not having been so steadily employed during the past year. I posted a set of printed instructions at each mine on the first of the year, explaining to the workmen under which conditions the greatest number of accidents were liable to occur, together with their causes, with minute instructions as to the best method of averting them, and I at the same time cautioned each mine foreman to see that the instructions were complied with, and while I do not attribute to these instructions the reduction in loss of life, yet they aided the foreman in instructing the miner as to his duties for self preservation.

But it will be seen that in spite of all the caution and warning given, men will put off something they should have done until it results in injury to themselves or others.

The inspection districts were revised during the past year by the Chief of the Bureau of Mines, and two additional districts were created.



In this report will be found other data relative to condition of the mines, the volume of ventilation supplied in cubic feet for each person employed; and while there have been local conditions that might have been improved, the general condition as to healthfulness and safety have been good.

I had occasion to make information before a justice of the peace against two small coal operators who insisted on employing more men than the law permitted, doing so on account of the great demand for coal; but on being confronted with the penalty they asked to have the case withdrawn on the promise that the violation would never occur again, which I did by leaving the case in the hands of the justice, and requesting him not to make any return of it to court, they paying all costs, which I find had the desired effect in having them comply with the law.

In regard to the capacity of the mines in this district, a large percentage of them are very small, and one-half as many mines could produce more coal if they were conducted on the same methods as the first twenty mines on Table "A;" and while a few small mines were opened during the year, there are two new shafts being opened and developed on modern methods with every appliance for healthfulness and safety. In regard to the output of coal, the report shows that the average days worked was equal only to three-fifths time, which was caused by a scarcity of railroad cars.

Very respectfully,

JOSEPH KNAPPER.

The following is a summary of the mining statistics and a classification of accidents in the district, the figures denoting production, shipment, etc., in net tons:

Number of mines in the district, .....	112
Number of mines in operation during 1901, .....	112
Number of tons of coal produced, .....	3,385,284
Number of tons shipped, .....	3,319,083
Number of tons used in the manufacture of coke, ....	4,646
Number of tons used for steam at the mines, .....	45,976
Number of tons sold to employes and others, .....	13,579
Number of tons produced by pick mining (approximately), .....	2,941,644
Number of tons produced by compressed air mining machines (approximately), .....	271,779
Number of tons produced by electric mining machines (approximately), .....	169,861
Number of coke ovens, .....	136
Number of tons of coke produced, .....	2,550
Number of persons employed inside of mines, ....	5,702

Number of persons employed outside of mines, . . . .	413
Total number of persons employed, . . . . .	6,115
Number of mules used in and about the mines, . . . .	635
Number of fatal accidents, . . . . .	3
Number of tons of coal produced per each fatal accident, . . . . .	1,128,428
Number of non-fatal accidents, . . . . .	23
Number of tons of coal produced per each non-fatal accident, . . . . .	147,186
Number of wives left widows by accidents, . . . . .	2
Number of orphans left by accidents, . . . . .	4
Number of kegs of powder used, . . . . .	14,650
Number of pounds of dynamite used, . . . . .	5,367
Number of cylindrical boilers in use, . . . . .	17
Number of tubular boilers in use, . . . . .	58
Number of steam locomotives in use, . . . . .	2
Number of electric motors in use, . . . . .	6
Number of mining machines operated by air, . . . . .	37
Number of mining machines operated by electricity, .	7
Number of old mines abandoned, . . . . .	6
Number of new mines opened, . . . . .	12
Average number of days worked at all the mines, . .	154 8-10

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TABLE A.—Showing Production of Coal, Number of Persons Employed by Each Operators During the Year and Average Number of Tons Produced per Employee.

Names of Operators.	Number of tons of coal produced.	Number of lives lost.	Number of tons of coal produced per life lost.	Number of persons injured.	Number of tons of coal produced per person injured.	Total number of persons employed.	Number employed per life lost.	Number employed per person injured.	Average number of tons of coal produced per employee.
Berwind White Coal Min. Co.,	551,653	.....	.....	4	137,913	1,053	.....	264	525
Morrisdale Coal Mining Co.,	446,869	1	446,869	5	89,373	630	630	126	709
Peale, Peacock & Kerr, Inc.,	496,051	1	496,051	3	165,350	672	672	224	735
G. L. Whitehead Coal Co.,	63,071	.....	.....	.....	.....	137	.....	.....	460
Cambria Coal Mining Co.,	83,178	.....	.....	.....	.....	160	.....	.....	519
W. A. Gould & Bro. & Rea-	.....	.....	.....	.....	.....	.....	.....	.....	.....
kirt Bro. & Co.,	60,645	.....	.....	.....	.....	180	.....	.....	326
Henry Liveright,	36,044	.....	.....	.....	.....	94	.....	.....	353
J. Swires & Ophir Coal Co.,	147,687	.....	.....	1	147,687	334	.....	334	442
Irish Bros. & Co.,	137,275	.....	.....	.....	.....	247	.....	.....	555
Forest Coal Mining Co.,	25,425	.....	.....	.....	.....	109	.....	.....	233
John G. Platt Coal Min. Co.,	22,689	.....	.....	.....	.....	75	.....	.....	312
Henrietta Coal Co., Ltd.,	29,811	.....	.....	.....	.....	64	.....	.....	466
O. L. Schoonover,	21,287	.....	.....	.....	.....	57	.....	.....	374
Moshannon Coal Mining Co.,	27,639	.....	.....	.....	.....	44	.....	.....	638
American Union Coal Co.,	16,669	.....	.....	.....	.....	71	.....	.....	234
John Barnes & Sons,	11,354	.....	.....	.....	.....	33	.....	.....	344
Beech Creek Coal & Coke Co.,	183,274	.....	.....	2	90,687	189	.....	93	959
M. and F. Craig,	23,120	.....	.....	.....	.....	59	.....	.....	493
Hair Bros.,	59,327	.....	.....	.....	.....	65	.....	.....	912
Thos. C. Heims & Co.,	33,140	.....	.....	1	38,140	105	.....	105	363
Brown & Dyer,	25,708	.....	.....	.....	.....	91	.....	.....	627
Harbison & Walker,	28,060	.....	.....	.....	.....	41	.....	.....	308
Betz Coal Mining Co.,	13,442	.....	.....	.....	.....	60	.....	.....	224
Thomas Blythe,	83,584	.....	.....	.....	.....	120	.....	.....	696
Ghem Coal Co.,	81,632	.....	.....	2	40,816	111	.....	55	725
Beulah Coal Co.,	66,011	.....	.....	3	22,005	134	.....	67	492
W. G. Fishburn,	55,282	.....	.....	.....	.....	96	.....	.....	575
Wm. Casker,	19,499	.....	.....	.....	.....	44	.....	.....	443
John Hooten,	26,169	.....	.....	.....	.....	50	.....	.....	523
Samuel Styer,	16,717	.....	.....	.....	.....	54	.....	.....	309
Alder Run Colliery Co.,	18,082	.....	.....	.....	.....	44	.....	.....	411
Adams & Co.,	58,906	.....	.....	.....	.....	80	.....	.....	736
T. J. Lee & Co., & Lee Coal	.....	.....	.....	.....	.....	.....	.....	.....	.....
Co.,	11,888	.....	.....	.....	.....	20	.....	.....	591
Coaldale Mining Co.,	29,248	1	29,248	.....	.....	57	.....	57	511
W. J. Davis,	12,089	.....	.....	.....	.....	23	.....	.....	523
John Walton & Son,	8,223	.....	.....	.....	.....	12	.....	.....	632
H. M. Hughes & Son,	4,963	.....	.....	.....	.....	15	.....	.....	331
J. & H. W. Todd,	82,023	.....	.....	1	82,023	142	.....	142	577
Mapleton Coal Mining Co.,	5,060	.....	.....	.....	.....	23	.....	.....	228
Meadowbrook Mining Co.,	819	.....	.....	.....	.....	9	.....	.....	91
J. R. Brown & Co.,	10,449	.....	.....	.....	.....	29	.....	.....	369
Hilling, Lamb & Co.,	2,988	.....	.....	.....	.....	10	.....	.....	298
W. F. Holt,	8,762	.....	.....	.....	.....	14	.....	.....	625
Stratton Bros.,	6,731	.....	.....	.....	.....	10	.....	.....	673
Penn Iron Co.,	18,256	.....	.....	.....	.....	40	.....	.....	456
L. Milton Wilson,	30,484	.....	.....	.....	.....	51	.....	.....	597
Townsend & Milson,	8,885	.....	.....	.....	.....	17	.....	.....	522
Walker & Gleason,	2,718	.....	.....	.....	.....	12	.....	.....	226
Jas. F. Stott,	5,656	.....	.....	.....	.....	18	.....	.....	314
Lawton & Co.,	3,306	.....	.....	1	3,306	30	.....	30	110
J. Mountz,	9,142	.....	.....	.....	.....	36	.....	.....	253
Chas. D. Lorraine,	11,574	.....	.....	.....	.....	24	.....	.....	482
J. R. Flenner & Co.,	6,457	.....	.....	.....	.....	37	.....	.....	174
Victoria Mining Co.,	125,128	.....	.....	.....	.....	204	.....	.....	613
Total,	3,355,284	3	1,128,428	23	147,186	6,115	2,038	266	553 1/2

TABLE B—Showing Tons of Coal Produced per Life Lost and per Non-Fatal Accident.

Names of Operators.	Accidents.			
	Fatal accidents.	Tons of coal mined per each fatal accident.	Non-fatal accidents.	Tons of coal mined per each non-fatal accident.
Berwind White Coal Mining Co., .....			4	137,913
Morrisdale Coal Mining Co., .....	1	446,869	5	89,373
Peale, Peacock & Kerr, Inc., .....	1	496,051	3	165,350
J. Swires & Ophir Coal Co., .....			1	107,687
Beech Creek Coal and Coke Co., .....			2	90,687
Thos. C. Heims & Co., .....			1	38,140
Ghem Coal Mining Co., ....			2	40,816
Beulah Coal Co., .....			3	22,065
Coaldale Mining Co., .....	1	29,248		
J. and H. W. Todd, .....			1	82,023
Lawton & Co., .....			1	3,306
Totals, .....	3	972,168	23	777,306

TABLE C—Classification of Accidents and the Occupation of Each Person Killed or Injured.

Cause of Accident.	Occupations of person injured.	Accident.		
		Fatal accident.	Injured.	Totals.
By fall of coal, .....	Miner, .....	1	3	4
By falls of roof, .....	Miner, .....		10	10
By falls of bony coal, .....	Miner, .....		3	3
By mine cars, .....	Driver, .....		4	4
By mine cars, .....	Miners, ....	1	3	4
By railroad cars, .....	Car shifter, .....	1		1
Totals, .....		3	23	26

TABLE D—Nationalities of Persons Killed and Injured.

Nationality.	Accident.		
	Killed.	Injured.	Totals.
American, .....		7	7
English, .....	1	3	4
Irish, .....		1	1
Scotch, .....		1	1
German, .....	1		1
Swede, .....	1	3	4
Hungarian, .....		1	1
Slav, .....		5	5
Italian, .....		2	2
Totals, .....	3	23	26

Report of the board of examiners for mine foreman and fire bosses examinations since the first meeting in 1885.

Board of examiners were: Mine Inspector, John Watt; Coal Operator, P. B. Zentmyer; Miner, W. S. Edwards.

Board met on the 30th of November, 1885, for the purpose of granting service certificates to those having held positions of foreman one year prior to the law of 1885 but no record appears to show who were granted such certificates.

An examination of candidates as to their qualifications and fitness to be foremen was held December 1st, 2d and 3d, 1885.

The average required to obtain a certificate was fixed at sixty per cent. and the following persons were granted certificates of second grade: R. Cooper, D. R. Philips, David Johnson, A. P. Isenberg, Geo. H. Wilson, John D. Jones, D. H. Thomas.

The second examination was held by the same board of examiners on the 1st, 2d and 3d of April, 1886, and the following persons passed: Edward Edwards, Charles Jenkins, Patrick Campbell, James Campbell, James Ward, W. H. Morris, Joseph Campbell, Thomas Booth, James Wood, Richard Bowen, William Devlin, John D. Jones, James Mechan, Archibald Bathgate, Thomas D. Forsythe, John Allen, John Hawkins.

The next examination was held on August 4th, 5th and 6th, 1886, and the following candidates were successful: Peter Cameron, A. P. Cameron, John McIntyre, Clarence Farber, William Bell, Thomas Benson, T. M. Barrett, C. J. Paul, E. A. Foster, William Alexander, Daniel Allsop, Isaac Smith.

The next examination was held in March 19th, 20th and 30th, 1887, and the following persons received certificates: John B. Hughes, E. C. Howe, W. C. Lingle, John Lochrie, W. Allison, Thomas Brown, John Stoker, John Quinn, James Campbell, D. H. Campbell, Francis Campbell, John F. Farrell, Cornelius Maher, Edward Grundy, George Gould, Edward Hughes, E. F. Townsend, James Starford, John Johnson, B. F. Smith, T. W. Simpson.

In January, 1888, the board met and granted the following certificates: William McDowell, David Allgood, John Batterby, Thomas Scollins, Andrew Patrick, Thomas Young, James Higham, Matthew Morris, Edward Bradley, James Pope, Edward Lloyd, W. J. Travesie, T. W. Jones, C. H. Edwards, Thomas E. Estep, Edward Hughes, E. F. Townsend, Hugh Rowland, Robert Whitehead, John Woodcock, John Maurice.

The examining board was then changed to: Mine Inspector, B. Callaghan; Coal Operator, P. B. Zentmyer; Miner, W. S. Edwards.

The board met on September 14, 1888, and granted the following certificates: Samuel Twiggs, John Milson, George Rees.



The board met on February 26th, 27th and 28th, 1889, and granted the following certificates: First grade, Edward Hughes, M. H. Blythe, John Madill, Richard Moran, J. C. Johnson. Second grade, James Scofield, John McCrory, James Nicholson, H. Redding, Evan Evans, James Jennicks, Thomas Bellis, James Gatehouse, Frank Martenson, John Hooten, D. D. Jones, Wm. Patterson, James White, Thomas Blythe, Richard Lobb, Thomas Pilkington, J. S. Kirkwood, John M. Click, Joseph Knapper, Wm. Fleming (certificate burned in January, 1898, and reissued in 1902), John May, Benjamin Lewis, Daniel Geahey, A. G. Spears.

The next board of examiners appointed was, Mine Inspector, Austin King; Coal Operator, P. B. Zentmyer; Miner, John Quinn.

An examination was held January 14, 15, 16 and 17, 1890, and certificates were issued to the following persons: First grade, Richard Dunn, Charlton Dixon, Joseph Wheatley, Daniel Allsop. Second grade, William Campbell, Henry Byron, Robert Fleming.

The next examination was held December 2, 3, 4 and 5, 1890, and the following certificates were issued: First Grade, James Harvey, Jr. Second Grade, Samuel B. Green, Alex. Monteith, Richard C. Morris, Thomas Marshall, William Irvine, Michael Craig, John Archibald.

The next examination was held January, 1891, by the following board: D. H. Thomas, Mine Inspector; P. B. Zentmyer, operator; William Devlin, miner, and certificates were issued to the following persons: First Grade, John Baird, John Morris. Second Grade, Thos. R. Pilkington, John C. Robinson, George Maxwell, Bernard McCann, William Todhunter, David Green, J. T. Jones, S. E. Pfoutz, James McAlarney, William E. Williams.

William Patterson was appointed to succeed P. B. Zentmyer; board next met in November 1892, and issued certificates to the following persons: First Grade, John Byron, John E. McDermott, John Carlin, W. J. K. Irvin, J. T. Evans. Second Grade, Chas. Rodden, Alex. Hyslop, J. R. Summerville, Thos. Stoker, James McFarlomay, J. C. Burns, Frank Carroll, William Edney, Benjamin Badman.

A new board was appointed and was composed of the following persons: D. H. Thomas, Inspector; A. S. R. Richards, operator; Matt. Morris, miner, which met on January 16, 1894, and issued the following certificates: First Grade, A. B. Murray, Edward Dawson, Robert Cole, Thomas Griffiths, Robert Lees. Second Grade, E. D. Davis, Donnell Craig, James Delves, H. C. Williams, John Howard, John McGowan, D. D. Lewis, Edward L. Shell, John Fyfe, Aaron Fuller, George Hartshorne, Henry Herbert, H. Thomas, John M. Baker, W. H. Booth, Wm. Bell, James Gray, Samuel Sykes.

The next examination was held January 22, 1895, and the following persons received certificates: First Grade, Matthew Dixon.

Second Grade, C. E. Sharpless, John Maurice, Jr., Thos. Duggan.

Owing to D. H. Thomas having died the newly appointed Mine Inspector, Joseph Knapper helped finish the above examination.

The next meeting of the board was held April 21, 22, 23 and 24, 1896, certificates were issued to the following persons: Second Grade, A. L. Pollock, D. H. Jones, Adolph Cook.

The next examination was held in April, 1897, and the following persons received certificates: First Grade, James Starford, C. H. Milson, R. C. Morris, D. H. Jones. Second Grade, Wm. Wood, Benj. Philips, John Ball, Richard Gray, David Dunn, Donald Craig, Joseph Harrison, John Tate, M. E. Marks, Arthur White, Geo. L. Minds.

The examining board was: Joseph Knapper, Mine Inspector; A. S. R. Richards, operator; E. F. Townsend, miner, which met in February, 1898, and the following certificates were issued: Second Grade, Joseph Harrison, James King, Patrick McCambly, M. Wayne, W. H. Ellis, John Allen.

The next meeting was held February 3, 1899, and certificates were issued to the following persons: First Grade, Thomas D. Forsythe. Second Grade, W. S. Blythe, Adolph Cook, Chas. E. Davis, James F. Green.

The next meeting was held January 20, 1900, and certificates were issued to the following persons: First Grade, James Delves. Second Grade, William Gray, Thomas Richardson, Thomas W. Gatehouse, Robert Patterson, James McConville, Wm. Wood, Thos. J. Richards.

January 4, 1901, a meeting was held and certificates issued to the following persons: First Grade, William Cameron. Second Grade, John Stevenson, Thos. B. Gallagher, Frank Boyd, James Flynn, Chas. E. Diehl, John P. Johnson, George Cole, Fred. Pepper, Wm. Pilkington, Harry C. Estep, Wm. C. Pollock, Wm. H. Gates, James Rice, Martin Duggan, Jas. B. Wilson, Chas. B. Maxwell, Michael Gorman, Chas. K. Johnson.

A description of fatal accidents that occurred in and about the mines:

The first accident that occurred during the year was to Albert Edward Mathias. He was mining coal with an elder brother, but he was continually found along the heading with trapper boys, and on this occasion was 1,000 feet away from his working place at a point where there was a ninety per cent. curve on the road, where there was a space of only eighteen inches between the side of the car and the side of the heading but on the opposite side there was from eight to fifteen feet of space. When the driver came out with a loaded mine car and right opposite the boy, the car left the track and caught him on the neck severing the jugular vein; he died in four hours.

Adolph Colander was fatally injured by being caught under a fall of coal; he was undercutting the coal at the time and was withdrawing pillars and mining the coal with two open ends, without having taken the precaution to secure the coal from falling by setting sprags, which is absolutely necessary in that kind of work owing to the constant crush and pressure from the overlying broken strata.

Edward Shirk a railroad car-shifter's both legs were run over, resulting in his death. It seemed that he was about to move the car down the siding, had put his brake stick in the wheel and was standing on the front end of the car, and before he had gotten a firm hold of the stick he must have moved the dog or ratchet catch of the wheel with his foot and instantly the car began to move and the brake stick struck him a heavy blow on the side of the head, knocking him off the car and in front of the wheels.

He was taken at once to the Philipsburg Hospital but nothing could be done for him.

#### Following is a Brief Report of the Mines.

Bermind White Coal Mining Company mines, Atlantic No. 1 and Enreka No. 5, No. 7, No. 16, No.18, No.19, No. 21, No. 22, No. 24 and No. 27 have ample ventilation and are generally well drained; at No. 7 shaft an entire new tippie and some other part of the head frame have been rebuilt during the year, and a rope haulage system put in use inside of the mine to dispense with mules in some sections.

Eureka No. 28 mine are two new shaft openings for hoisting, ventilation and traveling way. The hoist shaft is 14x24 feet and the fan shaft is 10x16 feet and both 130 feet deep, and were both put down in the space of four months, only a small Cameron pump with a two inch discharge pipe being necessary to keep the shaft free from water; the shafts are in virgin territory.

The coal seam is about four feet four inches, with six to eight inches of bony coal in addition, one and one-half feet from the roof.

A Capell fan eleven feet in diameter is being installed for ventilation, and two water tube Sterling boilers of 500 horse power will supply steam. A Norwalk air compressor 26x30 inch, will furnish power for mining coal by machinery, to operate the Sullivan machines; other arrangements are not yet complete.

They constructed two miles of railway before the shafts were commenced, and three sidings were made for loading under that number of shutes, also one track to pass the tipples with empty cars.

The plan on the tippie is for cars to run off the cage, pass over scales having automatic register for the weights of coal and on to self-acting tips, back switch to a chain and sprocket elevator, to



raise cars automatically to the opposite side of the shaft and on a level with the cage landing. The head frames are of the best oak, the length of lease not justifying steel tipples.

The haulage will be by electricity providing the mine does not generate gas, which will be well tested before any electric appliances are installed.

Morrisdale Coal Mining Company.—Mines Nos. 1, 2, 4, 6, 7 and 8 have been kept in a very fair condition. The mine fan formerly used while being under a constant strain to supply the necessary ventilation to the most distant parts of the mine, is being relieved of considerable pressure by opening a new No. 3 shaft one thousand feet ahead of the most distant parts of the mine, both as a new operation, also for pumping and to improve the ventilation. The equipments have not yet been decided upon, but the shaft is 10x16 feet and 165 feet deep.

Considerable water was encountered in sinking the shaft, and several times they were compelled to cease sinking during heavy rains owing to the shaft being put down through old workings of the Mos-hannon seam which collect water through the broken strata for at least two miles. The seam to be penetrated is "B," the same as their other shafts, and a very unfortunate part of this location is in branch faults that were all through the "D" seam and running in all directions. They tried to avoid them as far as possible and even abandoned one section after sinking thirty feet and building a small battery of boilers, for what they thought was a more suitable place; but on going down in the strata, the same conditions obtained.

The facility for sinking was a substantial head frame designed for this occasion only a compressor and an Ingersoll drilling machine, three hundred horse power steam boilers, one Reiley No. 11 pump 10x14 inch making 180 strokes per minute, located sixty-five feet down the shaft, a Cameron straight No. 10 pump with twenty-six inch stroke making seventy strokes per minute, and three other equally large pumps located in parts of the abandoned surrounding mines to relieve the shaft pumps as far as possible. All of the work was under the direct charge of the mine superintendent.

Peale, Peacock and Kerr mines.—Have been kept in very fair condition, they are Decatur Nos. 1, 2, 3 and 4 and Ogle Nos. 1 and 5 mines. At the latter place they expect to relieve the fan by making openings near the extreme working faces or by putting in another ventilator.

Cambria Coal Company's mines.—Leland Nos. 1, 2, 3 and 6 mines have been kept in very fair condition; at the latter mine a substantial furnace has been built with a bar surface of 6x6 feet which produces 12,700 cubic feet of air.

W. A. Gould & Bro. mines.—Midvale Nos. 1 and 2, Henderson Nos.

4 and 5, and Loraine mine of Reakirt Bros. & Co., by the above named operators have been kept in a fair condition. The first four mines are operated at a disadvantage in having only the coal left by former operators to take out, which causes a constant change in the plan of ventilation.

The same can be said of Henrietta and Friendship mines of the Henrietta Coal Company, also Moshannon Nos. 1, 2 and 3 of the Moshannon Coal Mining Co.

Beech Creek Coal and Coke Company's No. 8 Summerville mine has been in very fair condition throughout the year; a new Capell fan eight feet in diameter has been put in.

Acme Nos. 1 and 2 mines of the Victoria Coal Mining Company have been kept in a very fair condition both in ventilation and drainage.

Sterling Nos. 2 and 3 mines have not had any excess of air; I had to request that a furnace be built at No. 2 and they tried to connect with an adjoining mine to relieve the pressure and increase the air in No. 3 mine.

Fairmount Nos. 2 and 4 also Phoenix mine have been well ventilated, also Ophir Nos. 1 and 2, Ashman, Ghem and Royal of J. Swires & Stotts.

All the Irish Bros. mines, Red Jacket, Baltic Nos. 1 and 3, have been well ventilated; Colorado No. 3 which is not and I attributed this to inability or neglect of the foreman to have the air properly conducted into the workings. A volume of 32,000 cubic feet of air, I thought ample for the ninety-five men employed; and on my last visit, the superintendent promised to see that the foreman attended to remedying the defects complained of.

Forest Coal Mining Company's.—Falcon Nos. 1, 2 and 3 mines were kept in a very fair condition; the latter, a new mine has electric haulage, automatic tipples and a Stine fan for ventilation which have been installed during the year. ,

Guion and Colorado No. 2 have done very little work during the year, but were kept in a very fair condition; the same can be said of Cuba mine of the same company.

Orient Nos. 1 and 2 mines of Blair Bros. have been kept as well as the conditions would permit. Three openings have been made to avoid faulty territory encountered in No. 2 mine.

At Birds Eye mine a 16-foot Brazil fan was installed during the latter part of the year.

Webster No. 4 mine was in a very fair condition, also Electric, Lenore, Union Nos. 3 and 5; Varner, Plane and Parks mines of Harbison and Walker Company were kept in a very fair condition; the latter mine is abandoned, the coal having been exhausted.

Kyler No. 1 and Douglas mines have been kept in a very fair con-



dition, the latter mine however worked only three days during the year, but constant pumping has been necessary to keep it free from water.

Betz No. 1 mine is in good condition. No. 2 is a new mine which commenced to ship coal during the latter part of the year.

Alexandria mine has been well drained and has fair ventilation, but a very heavy creep came on near the end of the year, owing to the heavy strata above the coal, and the extreme width of rooms driven and small pillars left to support the strata; the work being on a side hill with three sides of coal appearing at crop line on the property.

TABLE I—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Eighth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>Berwind-White Coal Mining Co.</b>						
Atlantic No. 1.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola mills, .....	Pennsylvania Railroad.
Eureka No. 3.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 4.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 16.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 18.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 19.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 21.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 22.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 24.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 25.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
Eureka No. 28.	Clearfield.	Thos. Fisher.	Betz Bldg., Phila.	A. S. R. Richards.	Osceola Mills, .....	Pennsylvania Railroad.
<b>The Morrisdale Coal Co.</b>						
Morrisdale No. 1 shaft.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
Morrisdale No. 2 shaft.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	Pennsylvania Railroad.
Morrisdale No. 3 shaft.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
Morrisdale No. 4 drift.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	Pennsylvania Railroad.
Morrisdale No. 6 drift.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
Morrisdale No. 8 drift.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
Mabel.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	Pennsylvania Railroad.
Troy No. 1.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
Troy No. 4.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
Morrisdale No. 7.	Clearfield.	J. E. Hedding.	Morrisdale Mines.	Jas. Starford.	Morrisdale Mines, .....	New York Central R. R.
<b>Peele, Peacock &amp; Kerr, Inc.</b>						
Peacatur No. 1.	Clearfield.	Alex. Dunsmore.	Glen Ritchey.	John C. Dunsmore.	Philipsburg, .....	New York Central R. R.
Peacatur No. 2.	Clearfield.	Alex. Dunsmore.	Glen Ritchey.	John C. Dunsmore.	Philipsburg, .....	New York Central R. R.
Peacatur No. 3.	Clearfield.	Alex. Dunsmore.	Glen Ritchey.	John C. Dunsmore.	Philipsburg, .....	New York Central R. R.
Peacatur No. 4.	Clearfield.	Alex. Dunsmore.	Glen Ritchey.	John C. Dunsmore.	Philipsburg, .....	New York Central R. R.
Peacatur Nos. 1 and 5.	Clearfield.	Alex. Dunsmore.	Glen Ritchey.	Richard George, ..	Windburne, .....	New York Central R. R.
<b>G. L. Whitehead &amp; Co.</b>						
Standard No. 1.	Centre.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 2.	Centre.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 3.	Centre.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 4.	Clearfield.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 5.	Clearfield.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 6.	Clearfield.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 7.	Clearfield.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 8.	Clearfield.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.
Standard No. 9.	Clearfield.	John Whitehead.	1 N. 20th St., Phila.	Chas. W. Martin.	Houtzdale, .....	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Col- leries.	County.	Name of General Su- perintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
<b>Cambria Coal Mining Co.</b>						
Leland No. 1.....	Clearfield.....	E. S. Brubaker.....	Smoke Run.....	E. S. Brubaker.....	Smoke Run.....	Pennsylvania Railroad.
Leland No. 2.....	Clearfield.....	E. S. Brubaker.....	Smoke Run.....	E. S. Brubaker.....	Smoke Run.....	Pennsylvania Railroad.
Leland No. 3.....	Clearfield.....	E. S. Brubaker.....	Smoke Run.....	E. S. Brubaker.....	Osceola Mills.....	Pennsylvania Railroad.
Leland No. 4.....	Clearfield.....	E. S. Brubaker.....	Smoke Run.....	E. S. Brubaker.....	Smoke Run.....	Pennsylvania Railroad.
<b>W. A. Gould &amp; Bro.</b>						
Henderson No. 1.....	Clearfield.....	W. A. Gould.....	Brisbin.....	W. A. Gould.....	Brisbin.....	Pennsylvania Railroad.
Henderson No. 2.....	Clearfield.....	W. A. Gould.....	Brisbin.....	W. A. Gould.....	Brisbin.....	Pennsylvania Railroad.
Mt. Vale No. 1.....	Clearfield.....	W. A. Gould.....	Brisbin.....	W. A. Gould.....	Brisbin.....	Pennsylvania Railroad.
Mt. Vale No. 2.....	Clearfield.....	W. A. Gould.....	Brisbin.....	W. A. Gould.....	Brisbin.....	Pennsylvania Railroad.
<b>Reukirk Bros. &amp; Co., W. A. Gould &amp; Bro., Contractor.</b>						
Loraine.....	Clearfield.....	F. A. Vonbogueburg.....	Philadelphia.....	W. A. Gould.....	Brisbin.....	Pennsylvania Railroad.
<b>Henry Liveright.</b>						
Fairmount No. 1.....	Clearfield.....	Henry Liveright.....	Osceola Mills.....	Frank O'Rourke.....	Osceola Mills.....	Pennsylvania Railroad.
Fairmount No. 2.....	Clearfield.....	Henry Liveright.....	Osceola Mills.....	John Gaffney.....	Osceola Mills.....	Pennsylvania Railroad.
Fairmount No. 3.....	Clearfield.....	Henry Liveright.....	Osceola Mills.....	John Hogan.....	Osceola Mills.....	Pennsylvania Railroad.
Phoenix.....	Centre.....	Henry Liveright.....	Osceola Mills.....	John Hogan.....	Osceola Mills.....	Pennsylvania Railroad.
<b>J. Swires.</b>						
Ashman.....	Clearfield.....	.....	.....	J. Swires.....	Phillipsburg.....	New York Central R. R.
Ghem.....	Clearfield.....	.....	.....	J. Swires.....	Phillipsburg.....	New York Central R. R.
<b>Ophir Coal Co.</b>						
Ophir No. 1.....	Centre.....	.....	.....	J. Swires.....	Phillipsburg.....	New York Central R. R.
Royal.....	Clearfield.....	.....	.....	J. Swires.....	Phillipsburg.....	New York Central R. R.
<b>Irish Bros. &amp; Co.</b>						
Baltic Nos. 1 and 2.....	Clearfield.....	George Scott.....	Phillipsburg.....	El. F. Townsend.....	Phillipsburg.....	Pennsylvania Railroad.
Colorado Nos. 3 and 4.....	Clearfield.....	George Scott.....	Phillipsburg.....	A. P. Isenbarg.....	Munsons.....	New York Central R. R.
Red Jacket.....	Clearfield.....	George Scott.....	Phillipsburg.....	C. E. Husted.....	West Decatur.....	Pennsylvania Railroad.
<b>Forest Coal Mining Co.</b>						
Falcon No. 1.....	Clearfield.....	Frank W. Hess.....	Smoke Run.....	.....	.....	Pennsylvania Railroad.
Falcon No. 2.....	Clearfield.....	Frank W. Hess.....	Smoke Run.....	.....	.....	Pennsylvania Railroad.
Falcon No. 3 and Holson.....	Clearfield.....	Frank W. Hess.....	Smoke Run.....	.....	.....	Pennsylvania Railroad.

John G. Platt Coal Mining Co.	Clearfield	.....	Asa Spencer,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Colorado No. 2,	Clearfield	.....	Asa Spencer,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	New York Central R. R.
Cuba,	Clearfield	.....	Asa Spencer,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Guion,	Clearfield	.....	Asa Spencer,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Henrietta Coal Co., Ltd.	Clearfield	.....	O. L. Schoonover,	.....	Geo. Lobb,	.....	Brislin,	.....	Pennsylvania Railroad.
Friendship,	Clearfield	.....	O. L. Schoonover,	.....	Geo. Lobb,	.....	Brislin,	.....	Pennsylvania Railroad.
Henrietta,	Clearfield	.....	O. L. Schoonover,	.....	Geo. Lobb,	.....	Brislin,	.....	Pennsylvania Railroad.
O. L. Schoonover,	Clearfield	.....	O. L. Schoonover,	.....	Geo. Lobb,	.....	Brislin,	.....	Pennsylvania Railroad.
Forest No. 1,	Clearfield	.....	O. L. Schoonover,	.....	Geo. Lobb,	.....	Brislin,	.....	Pennsylvania Railroad.
Forest No. 2,	Clearfield	.....	O. L. Schoonover,	.....	Geo. Lobb,	.....	Brislin,	.....	Pennsylvania Railroad.
Moshannon Coal Mining Co.	Clearfield	.....	C. M. Rowland,	.....	C. M. Rowland,	.....	Houtzdale,	.....	New York Central R. R.
Moshannon No. 1,	Clearfield	.....	C. M. Rowland,	.....	C. M. Rowland,	.....	Houtzdale,	.....	New York Central R. R.
Moshannon No. 2,	Clearfield	.....	C. M. Rowland,	.....	C. M. Rowland,	.....	Houtzdale,	.....	New York Central R. R.
Moshannon No. 3,	Clearfield	.....	C. M. Rowland,	.....	C. M. Rowland,	.....	Houtzdale,	.....	New York Central R. R.
American Union Coal Co.	Clearfield	.....	Geo. I. Cant,	.....	Geo. I. Cant,	.....	Huntingdon,	.....	Pennsylvania Railroad.
Mt. Vernon No. 1,	Clearfield	.....	Geo. I. Cant,	.....	Geo. I. Cant,	.....	Huntingdon,	.....	Pennsylvania Railroad.
Mt. Vernon No. 2,	Clearfield	.....	Geo. I. Cant,	.....	Geo. I. Cant,	.....	Huntingdon,	.....	Pennsylvania Railroad.
John Barnes & Sons,	Clearfield	.....	Joseph Barnes,	.....	Joseph Barnes,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Lancashire No. 1,	Clearfield	.....	Joseph Barnes,	.....	Joseph Barnes,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Lancashire No. 2,	Clearfield	.....	Joseph Barnes,	.....	Joseph Barnes,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Lancashire No. 3,	Clearfield	.....	Joseph Barnes,	.....	Joseph Barnes,	.....	Philipsburg,	.....	Pennsylvania Railroad.
Beach Creek Coal and Coke Co.	Clearfield	.....	Jas. Summerville,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	New York Central R. R.
Summerville No. 1,	Clearfield	.....	Jas. Summerville,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	New York Central R. R.
Summerville No. 2,	Clearfield	.....	Jas. Summerville,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	New York Central R. R.
Summerville No. 3,	Clearfield	.....	Jas. Summerville,	.....	Wm. Powell, Jr.,	.....	Philipsburg,	.....	New York Central R. R.
M. & F. Craig,	Clearfield	.....	Michael Craig,	.....	Michael Craig,	.....	Brislin,	.....	Pennsylvania Railroad.
Sterling No. 1,	Clearfield	.....	Michael Craig,	.....	Michael Craig,	.....	Brislin,	.....	Pennsylvania Railroad.
Sterling No. 2,	Clearfield	.....	Michael Craig,	.....	Michael Craig,	.....	Brislin,	.....	Pennsylvania Railroad.
Sterling No. 3,	Clearfield	.....	Michael Craig,	.....	Michael Craig,	.....	Brislin,	.....	Pennsylvania Railroad.
Blair Bros.	Centre	.....	H. C. Blair,	.....	H. C. Blair,	.....	Tyrone,	.....	Pennsylvania Railroad.
Orient No. 1,	Centre	.....	H. C. Blair,	.....	H. C. Blair,	.....	Tyrone,	.....	Pennsylvania Railroad.
Orient No. 2,	Centre	.....	H. C. Blair,	.....	H. C. Blair,	.....	Tyrone,	.....	Pennsylvania Railroad.
Thos. C. Helms & Co.	Centre	.....	Thos. C. Helms,	.....	Thos. C. Helms,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
Electric,	Centre	.....	Thos. C. Helms,	.....	Thos. C. Helms,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
Lenore,	Centre	.....	Thos. C. Helms,	.....	Thos. C. Helms,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
Brown & Dwyer,	Centre	.....	Albert S. Brown,	.....	Albert S. Brown,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
Union No. 1,	Centre	.....	Albert S. Brown,	.....	Albert S. Brown,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
Union No. 2,	Centre	.....	Albert S. Brown,	.....	Albert S. Brown,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
Union No. 3,	Centre	.....	Albert S. Brown,	.....	Albert S. Brown,	.....	Osceola Mills,	.....	Pennsylvania Railroad.
The Harbison Walker Co.	Clearfield	.....	H. M. Kurtz,	.....	H. M. Kurtz,	.....	Woodland,	.....	Private tram road.
Varner,	Clearfield	.....	H. M. Kurtz,	.....	H. M. Kurtz,	.....	Woodland,	.....	Private tram road.
Plaine,	Clearfield	.....	H. M. Kurtz,	.....	H. M. Kurtz,	.....	Woodland,	.....	Private tram road.
Parks,	Clearfield	.....	H. M. Kurtz,	.....	H. M. Kurtz,	.....	Woodland,	.....	Private tram road.
W. G. Fishburn,	Clearfield	.....	R. C. Fishburn,	.....	R. C. Fishburn,	.....	Munsons,	.....	New York Central R. R.
Kyler No. 1,	Clearfield	.....	R. C. Fishburn,	.....	R. C. Fishburn,	.....	Munsons,	.....	New York Central R. R.
Douglas,	Clearfield	.....	R. C. Fishburn,	.....	R. C. Fishburn,	.....	Munsons,	.....	New York Central R. R.

TABLE I—Continued.

Names of Operators and Companies.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Betz Coal Mfg. Co. Betz No. 1..... Betz No. 2.....	Clearfield, Clearfield.....	H. B. Swope..... H. B. Swope.....	Curwensville..... Curwensville.....	John Stevenson, Geo. Granville.....	Elsena Mills..... Elsena Mills.....	Pennsylvania Railroad, Pennsylvania Railroad.
Thos. Blythe, Alexandra.....	Clearfield.....	Thos. Blythe.....	Madera.....	W. S. Blythe.....	Madera.....	Pennsylvania Railroad.
Ghem Coal Co. Ghem.....	Centre.....	Ghem Coal Co.....	Oscoda mills.....	Geo. Good.....	Oscoda Mills.....	Pennsylvania Railroad.
Bedahl Coal Co. Webster No. 3.....	Clearfield.....	Jas. H. Minds.....	Ramey.....	Jas. H. Minds.....	Ramey.....	Pennsylvania Railroad.
Birdseye, Wm. Casker.....	Clearfield.....	Wm. Casker.....	Houtzdale.....	.....	.....	Pennsylvania Railroad.
J. W. Hooten, Black Diamond No. 1.....	Clearfield.....	J. W. Hooten.....	Munsons.....	J. J. Hooten.....	Munsons.....	New York Central R. R.
Black Diamond No. 2, Sam'l Styre.....	Clearfield.....	Samuel Styre.....	Real Est. & Trust Bldg., Phila.....	D. W. Turley.....	Oscoda Mills.....	Pennsylvania Railroad.
W. T. Ratney & Co., Belsena No. 3.....	Clearfield.....	.....	.....	.....	.....	Pennsylvania Railroad.
James Gatchouse, Barbion.....	Clearfield.....	.....	.....	.....	.....	Pennsylvania Railroad.
Alder Run Colliery Co., Alder Run.....	Clearfield.....	.....	.....	Guy Snyder.....	Clearfield.....	New York Central R. R.
Adams & Co., Jefferson.....	Clearfield.....	Geo. B. Friday.....	Philipsburg.....	.....	.....	Pennsylvania Railroad.
Thos. J. Lee & Co., Ltd., and Lee Coal Co., Gearhart, Lee.....	Clearfield, Clearfield.....	Thos. J. Lee..... Thos. J. Lee.....	Philipsburg..... Philipsburg.....	Thos. J. Lee..... Thos. J. Lee.....	Philipsburg..... Philipsburg.....	Pennsylvania Railroad, New York Central R. R.



Condale Mining Co. Coalfield of Imperial No. 1.	Clearfield,....	Robt. L. Scott, .....	Phillipsburg, .....	Jas. Jennicks, .....	Phillipsburg, .....	Pennsylvania Railroad.
Davis, .....	Clearfield,....	W. J. Davis, .....	Hawk Run, .....	W. J. Davis, .....	Hawk Run, .....	Pennsylvania Railroad.
John Walton & Son, London, .....	Clearfield,....	John Walton, .....	Phillipsburg, .....	John Walton, .....	Phillipsburg, .....	Pennsylvania Railroad.
H. M. Hughes, Leader Nos. 1 and 2, .....	Clearfield,....	H. M. Hughes, .....	Drane, .....	H. M. Hughes, .....	Drane, .....	Pennsylvania Railroad.
John & H. Todd, Line Nos. 1 and 2, .....	Clearfield,....	John T. Todd, .....	Phillipsburg, .....	.....	.....	New York Central R. R.
Mapleton Coal Co., Mapleton, .....	Clearfield,....	Geo. F. May, .....	Osceola Mills, .....	Geo. F. May, .....	Osceola Mills, .....	Pennsylvania Railroad.
Meadow Brook Coal Mining Co., Meadow Brook, .....	Clearfield,....	W. H. Greenfield & Tr. Geo. H. Ruddle, .....	616 Real Est. & Tr. Bldg., Phila., .....	R. M. Miller, .....	West Decatur, .....	Pennsylvania Railroad.
Osceola No. 3, .....	Centre,.....	J. R. Brown, .....	Osceola Mills, .....	J. R. Brown, .....	Osceola Mills, .....	Pennsylvania Railroad.
Hilling, Lamb & Co., Porter Run, .....	Clearfield,....	.....	.....	Thos. Morgan, .....	McCartney, .....	Pennsylvania Railroad.
Phoenix, .....	Clearfield,....	Wm. F. Holt, .....	Phillipsburg, .....	.....	.....	New York Central R. R.
Kentuck, .....	Clearfield,....	John L. Stratton, .....	Phillipsburg, .....	John L. Stratton, .....	Phillipsburg, .....	Pennsylvania Railroad.
Reading, .....	Clearfield,....	H. C. Borrowes, .....	Lancaster, .....	C. Magher, .....	Osceola Mills, .....	Pennsylvania Railroad.
Schwein Bear Run, .....	Clearfield,....	L. Milton Wilson, .....	Heitzdale, Heitzdale, .....	.....	.....	A. and P. C. R. R. Pennsylvania Railroad.
Townsend & Milson, Shoof No. 2, .....	Clearfield,....	E. F. Townsend, .....	Phillipsburg, .....	E. F. Townsend, .....	Phillipsburg, .....	Pennsylvania Railroad.
Walker & Gleason, Troy, .....	Clearfield,....	Walker & Gleason, .....	Beckin, .....	.....	.....	Pennsylvania Railroad.
Jas. F. Stott, Opht No. 2, .....	Clearfield,....	Jas. F. Stott, .....	Phillipsburg, .....	John Rapsey, .....	Phillipsburg, .....	New York Central R. R.
Lawton & Cox, White Oak, .....	Clearfield,....	Lawton & Cox, .....	Lawton, .....	E. E. Lawton, .....	Madera, .....	Pennsylvania Railroad.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superin- tendent.	P. O. Address.	Railroad to Mine.
S. J. Mountz. Whiteside Nos. 1 and 2, .....	Clearfield,...	S. J. Mountz, .....	Moran, .....	Benj. Badman, ....	Houtzdale, .....	Pennsylvania Railroad.
C. D. Loraine. West Moshannon, .....	Clearfield,...	.....	.....	.....	.....	A. and P. C. R. R.
J. R. Fienner & Co. Standard No. 4, .....	Clearfield,...	John Tait, .....	Ramey, .....	John Tait, .....	Ramey, .....	Pennsylvania Railroad.
Victoria Coal Mining Co. Acme Nos. 1 and 2, .....	Clearfield,...	J. C. Whittenburg, .....	Broadway, N. Y.,...	S. M. Miller, .....	Phillipsburg, .....	New York Central R. R.

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Eighth Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.*		County.		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Barwind-White Coal Mining Co.				105,500	7,252	266	113,018			235	182			90	182	15
Atlantic No. 1.	Clearfield.	32,259	3,470	258	37,927	108	37,927			108	101			26	26	14
Eureka No. 5.	Clearfield.	65,533	2,207	351	68,145	131	68,145			131	157			135	265	8
Eureka No. 7.	Clearfield.	21,796	982	58	25,836	88	25,836			88	77	1		80	432	22
Eureka No. 16.	Clearfield.	20,916	116	19	21,051	167	21,051			167	46			51	5	12
Eureka No. 18.	Clearfield.	101,922	1,657	290	103,739	185	103,739			185	147	2		493	5	9
Eureka No. 21.	Centre.	24,807	98	34	24,999	132	24,999			132	60			194	77	7
Eureka No. 23.	Clearfield.	116,015	1,851	224	118,699	31	118,699			196	190	1		678		13
Eureka No. 24.	Clearfield.	15,918	730	31	16,673	98	16,673			98	45			20	102	7
Eureka No. 27.	Clearfield.	20,740	216	33	20,959	53	20,959			140	53					13
Eureka No. 35.	Clearfield.	20,740	560		560		560									
Total.				529,066	21,113	1,471	551,653			3143	1,078		4	1,775	1,003	105
The Morrisdale Coal Co.				240,650	8,250	1,768	255,314			259	330	1	3	2,014	5,000	26
Morrisdale No. 1 shaft.	Clearfield.	100,823	3,703	139	104,726	243	104,726			243	135			900	1,500	8
Morrisdale No. 2 shaft.	Clearfield.	8,137	139	10	8,137	139	8,137			139	10			65		2
Morrisdale No. 4.	Clearfield.	18,378	18,378	246	18,378	246	18,378			246	23			142		1
Morrisdale No. 6.	Clearfield.	8,653	8,653	139	8,653	139	8,653			139	10			31		2
Morrisdale No. 8.	Clearfield.	3,714	3,714	287	3,714	16	3,714			156	16			27		3
Mabel.	Clearfield.	20,375	20,375	170	20,375	268	20,375			268	37			196		3
Troy Nos. 1 and 2.	Clearfield.	8,977	8,977	170	8,977	13	8,977			170	13			49		1
Troy No. 4.	Clearfield.	3,977	3,977	56	3,977	10	3,977			56	10			39		1
Morrisdale No. 7.	Clearfield.	4,015	4,015		4,015		4,015									
Total.				428,502	11,953	1,768	446,869			1,06	60	1	5	3,454	6,500	48

TABLE II—Continued.

Names of Operators and Collieries.	County.	Number of Operators and Collieries.												
		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Dodge, Peaceock & Kerr, Inc.														
Operator No. 1.	Clearfield.	27,223			27,223			218	49					5
Operator No. 2.	Clearfield.	79,658			79,658			534	83					10
Operator No. 3.	Clearfield.	154,625	778	268	155,781			292	200		1		100	13
Operator No. 4.	Clearfield.	41,137			41,137			256	58					5
Operator No. 5.	Clearfield.	189,358	2,064	659	192,222			223	282	1	1	1,366	166	3
Ogle Nos. 1 and 5.	Clearfield.													
Total.		462,311	2,792	928	466,031			228	672	1	2	1,366	266	36
G. L. Whitehead Coal Co.														
Standard No. 1.	Centre.	22,744			22,744			237	43			237	200	4
Standard No. 2.	Centre.	6,716			6,716			293	8			96	196	1
Standard No. 3.	Centre.	1,813			1,813			212	2			143	125	1
Standard No. 4.	Clearfield.	11,798			11,798			154	45			62	102	3
Standard Nos. 5 and 7.	Clearfield.	3,280			3,280			162	28			115	216	1
Standard No. 9.	Clearfield.	62,671			62,671			173	137			697	1,421	14
Total.		108,012			108,012			1,065	355			1,117	2,050	23
Cambria Coal Mining Co.														
Leland No. 1.	Clearfield.	56,927	179	264	57,370			120	167					12
Leland No. 2.	Clearfield.	6,351			6,351			113	11					1
Leland No. 3.	Clearfield.	3,846			3,846			174	13					1
Leland No. 6.	Clearfield.	14,611			14,611			162	29					3
Total.		82,798	179	264	83,178			144	160					12
W. A. Gould & Bro.														
Henderson No. 1.	Clearfield.	4,221			4,221			120	12			25		1
Henderson No. 2.	Clearfield.	4,752			4,752			140	17			110		1
Midvale No. 1.	Clearfield.	9,728			9,728			162	34			110		2
Midvale No. 2.	Clearfield.	8,648			8,648			182	36			115		3

Reakart Bros, Loraine, .....	Clearfield, .....	33,906	.....	.....	171	81	.....	150	.....	7
Total, .....	.....	60,645	.....	53,606	.....	186	.....	400	.....	17
Henry Liverlight.										
Fairmont No. 2, .....	Clearfield, .....	16,948	.....	16,948	.....	43	.....	101	.....	12
Fairmont No. 3, .....	Clearfield, .....	1,413	.....	1,413	.....	9	.....	10	.....	2
Fairmont No. 4, .....	Clearfield, .....	1,786	.....	1,786	.....	46	.....	13	.....	2
Phoenix, .....	Centre, .....	15,927	.....	15,927	.....	264	.....	98	.....	7
Total, .....	.....	36,044	.....	36,141	.....	129	.....	222	.....	23
J. Swires and Ophir Coal Co.										
Ashman, .....	Clearfield, .....	32,193	176	.....	143	75	.....	1	.....	8
Ghem, .....	Clearfield, .....	32,400	40	.....	132	77	.....	240	.....	8
Ophir No. 1, .....	Centre, .....	69,377	138	.....	146	81	.....	200	.....	15
Royal, .....	Clearfield, .....	15,760	781	.....	89	101	.....	100	.....	10
Total, .....	.....	116,171	1,516	.....	132	334	.....	565	.....	41
Forest Coal Mining Co.										
Falcon No. 1, .....	Clearfield, .....	15,761	.....	15,761	.....	25	.....	10	.....	3
Falcon No. 2, .....	Clearfield, .....	2,845	81	.....	100	50	.....	50	.....	2
Falcon No. 3, .....	Clearfield, .....	4,797	.....	4,797	.....	25	.....	40	.....	2
Hobson, .....	Clearfield, .....	1,941	.....	1,941	.....	9	.....	30	.....	2
Total, .....	.....	25,344	81	.....	125	109	.....	140	.....	8
Irish Bros. & Co.										
Battle No. 1, .....	Clearfield, .....	43,406	.....	56	.....	259	.....	150	.....	15
Colorado Nos. 3 and 4, .....	Clearfield, .....	51,120	548	.....	217	113	.....	170	.....	8
Red Jacket, .....	Clearfield, .....	39,848	.....	2,069	.....	248	.....	341	.....	2
Total, .....	.....	134,434	548	2,293	.....	241	.....	661	.....	26
John G. Platt Coal Mining Co.										
Colorado No. 2, .....	Clearfield, .....	2,719	22	.....	24	25	.....	20	.....	4
Cuba, .....	Clearfield, .....	14,881	84	.....	130	25	.....	50	.....	4
Guion, .....	Clearfield, .....	4,821	44	.....	43	25	.....	40	.....	4
Total, .....	.....	22,421	150	.....	65	75	.....	150	.....	12
Henrietta Coal Co., Ltd.										
Henrietta, .....	Clearfield, .....	26,432	.....	161	.....	132	.....	8	.....	14
Friendship, .....	Clearfield, .....	3,248	.....	3,248	.....	72	.....	2	.....	2
Total, .....	.....	29,680	.....	161	.....	112	.....	10	.....	16
O. L. Schomover.										
Forest No. 1, .....	Clearfield, .....	11,026	.....	163	.....	90	.....	140	.....	7
Forest No. 2, .....	Clearfield, .....	9,660	.....	138	.....	78	.....	119	.....	5
Total, .....	.....	20,686	.....	301	.....	84	.....	259	.....	12



TABLE II—Continued.

Names of Operators and Collieries.		County.		Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Moshannon Coal Mining Co.				Clearfield.	13,479		13,479			241	28					6
Moshannon No. 1.				Clearfield.	10,512		10,512			154	4					2
Moshannon No. 2.				Clearfield.	3,618		3,618			32	1					2
Moshannon No. 3.				Clearfield.												
Total.					27,629		27,629			134	44					10
American Union Coal Co.				Clearfield.	13,578		13,578			246	28			35	100	3
Mt. Vernon No. 1.				Clearfield.	2,631		2,631			44	43			20	60	2
Mt. Vernon No. 2.				Clearfield.												
Mt. Vernon No. 3.				Clearfield.												
Total.					16,669		16,669			149	71			55	160	5
M. & F. Craig.				Clearfield.	8,560		8,560			112	25			50		4
Sterling No. 1.				Clearfield.	20,100		20,100			148	39			180	20	3
Sterling No. 2.				Clearfield.												
Sterling No. 3.				Clearfield.												
Total.					28,120		28,120			145	59			280	20	7
Thos. C. Helms.				Centre.	12,266		12,266			98	41			125		8
Electric, Lenore.				Clearfield.	25,574		25,574			210	61			1	175	8
Total.					38,140		38,140			154	105			1	300	16
Brown & Dwyer.				Centre.	6,802		6,802			130	14					2
Union No. 3.				Clearfield.	18,996		18,996			169	27					4
Union No. 5.				Clearfield.												
Total.					25,798		25,798			164	41					6

Harbison Walker Co.									
Varner,	Clearfield,	7,965	.....	7,965	.....	159	.....	32	.....
.....	Clearfield,	12,500	.....	12,500	.....	200	.....	26	.....
Plane,	Clearfield,	7,585	.....	7,585	.....	140	.....	33	.....
Parks,	Clearfield,	.....	.....	.....	.....	.....	.....	.....	.....
Total,	.....	28,060	.....	28,060	.....	163	.....	91	.....
Betz Coal Mining Co.									
Betz No. 1,	Clearfield,	12,054	16	29	.....	162	.....	49	.....
Betz No. 2,	Clearfield,	1,307	8	28	1,343	35	11	25	5
Total,	.....	13,361	24	57	13,412	98	60	270	5
W. G. Fishburn.									
Kyler No. 1,	Clearfield,	53,941	187	527	54,655	119	87	646	450
Douglas,	Clearfield,	342	285	.....	627	3	9	6	40
Total,	.....	54,283	472	527	55,282	61	96	652	490
William Casper.									
Birdseye,	Clearfield,	19,040	336	123	19,499	210	44	35	.....
John Hooten.									
Black Diamond No. 1,	Clearfield,	25,945	.....	224	26,169	111	50	200	.....
Samuel Styre.									
Black Diamond No. 2,	Clearfield,	14,907	11	1,799	16,717	190	54	90	.....
Thos. Lee & Co., Ltd., and T. J. Lee Coal Co.									
Gearhart,	Clearfield,	4,459	.....	56	4,515	88	9	.....	.....
Lee,	Clearfield,	7,295	.....	18	7,373	147	11	.....	.....
Total,	.....	11,754	.....	134	11,888	117	20	.....	.....
L. Milton Wilson.									
Schwinn,	Clearfield,	25,596	.....	97	29,693	246	41	180	150
Bear Run,	Centre,	791	.....	791	.....	37	10	7	.....
Total,	.....	30,387	.....	97	30,484	141	51	187	150

## Recapitulation

Barwind-White Coal Mining Co.,	529,066	21,113	1,474	551,653	.....	143	1,055	.....	4	1,775	1,063
Morrisdale Coal Mining Co.,	428,502	11,753	1,768	429,661	106	185	466	1	5	3,454	48
Peale, Peacock and Kerr, Inc.,	492,311	2,782	958	496,051	.....	238	672	1	3	1,396	290
G. L. Whitehead Coal Co.,	63,071	.....	.....	63,071	.....	175	157	.....	.....	1,421	14
Cambria Coal Mining Co.,	60,648	179	201	60,648	.....	174	180	.....	.....	697	12
Swires and Ophir Coal Co.,	36,094	.....	.....	36,094	.....	129	94	.....	.....	400	17
Henry Liveright,	.....	.....	.....	.....	.....	129	94	.....	.....	222	23
Swires and Ophir Coal Co.,	146,171	1,516	.....	147,687	.....	132	834	.....	.....	565	41

## Recapitulation—Continued.

Names of Operators and Collieries.	County.	Number of tons used for										Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
		Shipment of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.					
Forest Coal Mining Co.,	.....	25,344	81	2,293	25,425	.....	125	109	.....	.....	140	350	8						
Irish Bros. & Co.,	.....	134,434	548	.....	137,275	.....	241	247	.....	.....	661	.....	26						
John G. Platt Coal Mining Co.,	.....	23,431	150	88	23,689	.....	67	75	.....	.....	150	.....	12						
Henrietta Coal Co., Ltd.,	.....	29,680	.....	161	29,841	.....	112	64	.....	.....	10	.....	16						
O. L. Schoenover,	.....	20,986	.....	301	21,287	.....	84	57	.....	.....	259	70	10						
Moshannon Coal Mining Co.,	.....	27,634	.....	.....	27,634	.....	134	44	.....	.....	.....	.....	5						
American Union Coal Co.,	.....	16,969	.....	.....	16,969	.....	140	71	.....	.....	55	100	10						
John Barnes & Sons,	.....	11,354	.....	.....	11,374	.....	157	22	.....	.....	129	.....	5						
Beech Creek Coal and Coke Co.,	.....	179,146	1,144	1,054	181,374	.....	239	189	2	.....	260	20	7						
M. & F. Craik,	.....	29,120	.....	.....	29,120	.....	145	59	.....	.....	600	.....	12						
Blair Brothers,	.....	59,327	.....	.....	59,327	.....	240	65	.....	.....	350	.....	16						
Thomas C. Helms & Co.,	.....	38,140	.....	.....	38,140	.....	154	105	1	.....	300	.....	4						
Brown & Twyer,	.....	25,708	.....	.....	25,708	.....	174	41	.....	.....	.....	.....	3						
Harbison Walker Co.,	.....	15,260	.....	.....	15,260	.....	163	51	.....	.....	270	5	2						
Hetz Coal Mining Co.,	.....	83,410	34	.....	83,442	.....	226	120	.....	.....	600	.....	3						
Ghem Coal Co.,	.....	81,444	32	112	81,623	.....	251	111	.....	.....	390	.....	21						
Beulah Coal Co.,	.....	65,243	241	188	66,011	.....	120	134	3	.....	350	950	12						
W. G. Fishburn,	.....	54,283	472	.....	55,282	.....	251	96	.....	.....	652	490	6						
Wm. Caskey,	.....	19,040	336	.....	19,469	.....	210	44	.....	.....	35	.....	3						
John Hooten,	.....	25,945	.....	123	26,169	.....	111	50	.....	.....	216	.....	3						
Samuel Styre,	.....	14,907	11	1,799	16,717	.....	190	51	.....	.....	90	.....	7						
Alder Run Colliery Co.,	.....	17,907	69	1,105	18,082	.....	180	44	.....	.....	216	11	7						
Adams & Co.,	.....	58,906	.....	.....	58,906	.....	257	80	.....	.....	260	.....	5						
Thos. J. Lee & Co., Ltd., and Lee Coal Co.,	.....	11,754	.....	131	11,885	.....	117	20	.....	.....	.....	.....	7						
Coaldale Mining Co.,	.....	29,248	.....	.....	29,248	.....	164	57	.....	.....	.....	.....	5						
W. J. Davis,	.....	11,963	.....	136	12,099	.....	178	23	.....	.....	20	.....	3						
Wm. Van Hook & Son,	.....	4,895	11	.....	4,968	.....	69	15	.....	.....	.....	.....	3						
H. M. Hughes & Son,	.....	81,413	.....	610	82,023	.....	152	142	.....	.....	420	.....	16						
J. & H. W. Todd Bros.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5						
Mapleton Coal Co.,	.....	5,060	.....	.....	5,060	.....	88	23	.....	.....	23	.....	.....						

Meadow Brook Mining Co.,	506	201	112	519	.....	209	9	.....	40	100	4
R. Brown & Co.,	10,449	.....	.....	10,449	.....	131	23	.....	51	25	5
Hilling, Lamb & Co.,	2,960	.....	28	2,988	.....	96	11	.....	30	.....	1
W. F. Holt,	8,762	.....	.....	8,762	.....	157	14	.....	.....	.....	4
Stratton Bros.,	6,675	.....	56	6,721	.....	140	13	.....	.....	.....	5
Penn Iron Co.,	13,081	123	92	13,256	.....	130	43	.....	.....	.....	2
L. Milton Wilson,	30,385	.....	97	30,483	.....	131	51	.....	173	150	6
Townsend & Wilson,	9,738	.....	.....	9,885	.....	120	17	.....	187	.....	7
Walker & Gleason,	5,738	.....	.....	5,738	.....	121	12	.....	16	.....	3
Jas. F. Stott,	5,600	.....	56	5,656	.....	132	18	.....	25	100	1
Lawton & Cox,	3,301	.....	5	3,316	.....	53	30	.....	45	150	7
J. Mountz,	9,142	.....	.....	9,142	.....	98	37	.....	.....	.....	4
Chas. J. Lorraine,	11,574	.....	.....	11,574	.....	197	24	.....	.....	.....	3
Chas. Fleming & Co.,	6,456	.....	1	6,457	.....	103	37	.....	40	100	4
Victoria Mining Co.,	119,928	4,990	210	125,128	.....	221	204	.....	.....	.....	1
Grand total,	3,319,083	45,976	13,579	3,383,284	2,530	136	6,115	3	15,150	5,370	635

\*Production and other data for single collieries will be found in the recapitulation.  
†Average.





[illegible]



	Troy No. 4.	Clearfield.	1	10	.....	1	1	.....	13	.....	13	.....	13
	Morrisdale No. 7.	Clearfield.	10	9	.....	1	1	.....	10	.....	10	.....	10
Total.			7	444	.....	34	16	61	592	.....	6	13	38
<b>Peale, Peacock &amp; Kerr, Inc.</b>													
Decatour No. 1.	Clearfield.	43	.....	5	.....	3	.....	1	47	.....	2	.....	2
Decatour No. 2.	Clearfield.	1	71	.....	3	.....	1	.....	78	.....	3	.....	15
Decatour No. 3.	Clearfield.	1	174	.....	7	.....	2	.....	185	.....	1	.....	200
Decatour No. 4.	Clearfield.	1	50	.....	2	.....	1	.....	56	.....	2	.....	58
Ogle Nos. 1 and 5.	Clearfield.	2	240	5	8	5	.....	.....	209	.....	1	.....	252
Total.		5	578	5	26	10	2	.....	636	.....	7	6	46
<b>G. L. Whitehead Coal Co.</b>													
Standard No. 1.	Centre.	1	39	.....	2	.....	.....	.....	42	.....	1	.....	43
Standard No. 2.	Centre.	1	6	.....	1	.....	.....	.....	8	.....	.....	.....	8
Standard No. 3.	Centre.	1	6	.....	1	.....	.....	.....	8	.....	.....	.....	8
Standard No. 4.	Clearfield.	1	38	4	2	.....	.....	.....	46	.....	.....	.....	45
Standard Nos. 5 and 7.	Clearfield.	1	25	.....	2	.....	.....	.....	28	.....	.....	.....	28
Standard No. 9.	Clearfield.	1	3	.....	1	.....	.....	.....	5	.....	.....	.....	5
Total.		6	117	4	9	.....	.....	.....	136	.....	1	.....	137
<b>Cambria Coal Mining Co.</b>													
Leland No. 1.	Clearfield.	1	85	2	6	1	.....	.....	95	1	2	2	1
Leland No. 2.	Clearfield.	1	8	.....	1	.....	.....	.....	10	.....	.....	.....	1
Leland No. 3.	Clearfield.	1	7	1	1	.....	.....	.....	11	.....	.....	.....	1
Leland No. 6.	Clearfield.	1	15	1	2	1	.....	.....	23	1	1	1	6
Total.		4	118	4	10	3	.....	.....	139	3	3	2	5
<b>W. A. Gould &amp; Bro.</b>													
Henderson No. 4.	Clearfield.	1	10	.....	1	.....	.....	.....	12	.....	.....	.....	12
Henderson No. 5.	Clearfield.	1	15	.....	1	.....	.....	.....	17	.....	.....	.....	17
Middlevale No. 1.	Clearfield.	1	20	.....	3	.....	.....	.....	34	.....	.....	.....	34
Middlevale No. 2.	Clearfield.	1	31	.....	3	1	.....	.....	36	.....	.....	.....	36
Beakert Bros. & Co., W. A. Gould, Contractor.	Clearfield.	1	72	.....	5	1	.....	.....	89	.....	1	.....	81
Lorraine.		5	139	.....	13	2	.....	.....	179	.....	1	.....	180
Total.		1	36	1	3	.....	.....	.....	41	.....	.....	.....	43
Fairmont No. 2.	Clearfield.	1	8	.....	1	.....	.....	.....	8	.....	.....	.....	9
Fairmont No. 3.	Clearfield.	1	8	.....	1	.....	.....	.....	8	.....	.....	.....	9
Fairmont No. 4.	Centre.	1	27	.....	2	.....	.....	.....	30	.....	1	.....	1
Phoenix.		3	79	1	5	.....	.....	.....	88	3	.....	.....	6
Total.		3	79	1	5	.....	.....	.....	88	3	.....	.....	94



Cuba, Gulon,	Clearfield, Clearfield,	1 1	13 17	1 1	2 2	.....	.....	.....	22 22	.....	1 1	.....	1 1	1 1	3 3	25 25
Total,		3	53	3	6	1	.....	.....	66	.....	3	.....	3	.....	9	75
Henrietta, Friendship,	Clearfield, Clearfield,	1 .....	47 8	.....	3 .....	.....	.....	.....	52 9	.....	.....	.....	.....	1 .....	2 1	54 10
Total,		1	55	.....	4	.....	.....	.....	61	.....	1	.....	.....	2	3	64
Forest No. 1, Forest No. 2,	Clearfield, Clearfield,	1 .....	27 17	1 .....	3 3	.....	.....	.....	32 20	.....	1 1	.....	1 .....	.....	4 1	36 21
Total,		1	44	1	6	.....	.....	.....	52	.....	2	.....	1	.....	5	57
Moshannon Coal Mining Co. Moshannon No. 1, Moshannon No. 2, Moshannon No. 3,	Clearfield, Clearfield, Clearfield,	1 ..... .....	19 8 6	..... ..... .....	3 1 1	1 ..... .....	.....	.....	25 9 7	.....	.....	.....	2 ..... .....	.....	3 ..... .....	28 9 7
Total,		1	33	.....	5	1	.....	.....	41	.....	1	.....	2	.....	3	44
American Union Coal Co. Mt. Vernon No. 1, Mt. Vernon No. 11,	Clearfield, Clearfield,	1 1	21 38	..... .....	1 .....	.....	.....	.....	26 42	.....	.....	.....	2 .....	.....	2 1	28 43
Total,		2	59	.....	2	.....	.....	.....	68	.....	1	.....	2	.....	3	71
John Barnes & Sons. Lancashire Nos. 2 and 3,	Clearfield,	1	25	.....	3	1	.....	.....	30	.....	1	.....	2	.....	3	33
Beech Creek Coal & Coke Co. Summersville No. 8,	Clearfield,	1	145	4	10	3	.....	.....	171	.....	1	.....	2	.....	8	189
M. and F. Craig. Sterling No. 2, Sterling No. 3,	Clearfield, Clearfield,	1 1	25 26	..... .....	2 2	.....	.....	.....	28 29	.....	.....	.....	1 .....	.....	1 1	29 30
Total,		2	51	.....	4	.....	.....	.....	57	.....	.....	.....	1	.....	2	59
Blair Bros. Orient Nos. 1 and 2,	Centre,	1	52	.....	2	2	1	.....	58	.....	1	.....	1	.....	2	65
Thos. C. Helms & Co. Electric, Lenore,	Centre, Clearfield,	1 1	36 53	..... .....	3 4	.....	.....	.....	40 58	.....	1 1	.....	2 .....	.....	1 3	44 61
Total,		2	89	.....	7	.....	.....	.....	98	.....	2	.....	2	.....	1	105



TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.
		Inside foremen or mine bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.	
Brown & Dwyer. Union No. 2. Union No. 5. Total.	Centre.	1	11	1	1	1	1	13	1	1	1	1	1	1	14	
	Clearfield.	1	22	1	2	1	1	26	1	1	1	1	1	1	27	
	Total.	2	33	1	3	1	1	39	2	2	2	2	2	2	41	
Harrison Walker Co. Varner. Plane. Parks. Total.	Clearfield.	1	25	2	1	1	1	29	1	1	1	1	2	3	32	
	Clearfield.	1	22	1	1	1	3	25	1	1	1	1	2	1	26	
	Clearfield.	1	25	1	1	1	3	30	1	1	1	1	2	3	33	
W. G. Fishburn. Kyler No. 1 Douglas. Total.	Clearfield.	3	72	4	1	1	5	84	1	2	2	1	4	7	91	
	Clearfield.	1	56	8	6	1	4	76	2	1	1	2	6	11	87	
	Clearfield.	1	6	1	1	1	1	8	1	1	1	1	1	1	9	
Betz Coal Mining Co. Betz No. 1. Betz No. 2. Total.	Clearfield.	1	62	9	7	1	4	84	2	2	2	2	6	12	96	
	Clearfield.	1	40	1	2	1	1	44	1	2	1	1	1	5	49	
	Clearfield.	1	8	1	1	1	1	9	1	1	1	1	1	2	11	
Total.		1	48	3	3	1	1	53	2	2	2	1	2	7	60	

Alexandra, .....	Thos. Blythe.	Clearfield,.....	1	104	.....	5	3	2	115	.....	2	.....	2	1	.....	5	120
Ghem, .....	Ghem Coal Co.	Centre,.....	1	98	.....	5	1	2	107	.....	1	.....	1	.....	2	4	111
Webster No. 4, .....	Beulah Coal Co.	Clearfield,.....	1	101	.....	7	5	6	129	.....	2	1	.....	2	9	14	134
Birdseye, .....	Wm. Casker.	Clearfield,.....	1	30	2	4	.....	4	41	.....	.....	2	.....	1	.....	3	41
Black Diamond No. 1, .....	J. W. Hootten.	Clearfield,.....	1	40	.....	2	1	.....	44	.....	1	.....	.....	2	3	6	50
Black Diamond No. 2, .....	Sam'l Styre.	Clearfield,.....	1	45	.....	3	.....	2	51	.....	.....	.....	.....	3	.....	3	54
Belsena No. 3, .....	W. J. Rainey & Co.	Clearfield,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Banion, .....	James Gatehouse.	Clearfield,.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Alder Run, .....	Alder Run Colliery Co.	Clearfield,.....	1	40	.....	2	.....	.....	43	.....	.....	.....	.....	1	.....	1	44
Jefferson, .....	Adams & Co.	Clearfield,.....	1	73	.....	2	.....	.....	76	.....	1	.....	.....	2	1	4	80
T. J. Lee & Co., Ltd., and Lee Coal Co.,		Clearfield,.....	.....	8	.....	1	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	9
Gearhart, .....		Clearfield,.....	1	8	.....	1	.....	.....	10	.....	.....	.....	.....	1	.....	1	11
Lee, .....		.....	1	16	.....	2	.....	.....	19	.....	.....	.....	.....	1	.....	1	20
Total, .....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coaldale No. 4, .....	Coaldale Mining Co.	Clearfield,.....	1	46	.....	5	1	.....	53	.....	1	.....	1	1	1	4	57
Davis, .....	W. J. Davis.	Clearfield,.....	1	13	.....	3	.....	.....	22	.....	.....	.....	.....	1	.....	1	23
London, .....	John Walton & Son.	Clearfield,.....	1	10	.....	1	.....	.....	12	.....	.....	.....	.....	1	.....	1	13
Leader Nos. 1 and 2, .....	H. M. Hughes & Son.	Clearfield,.....	.....	12	.....	2	.....	.....	14	.....	1	.....	.....	.....	.....	1	15
Lare Nos. 1 and 2, .....	John and H. W. Todd.	Clearfield,.....	1	121	2	3	1	2	135	1	1	.....	.....	1	4	7	142
Mapleton, .....	Mapleton Coal Co.	Clearfield,.....	1	16	1	2	1	1	22	.....	.....	.....	.....	1	.....	1	23

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.
		Inside foremen or mine bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.	
Meadowbrook Mining Co.	Clearfield,.....	.....	7	.....	.....	.....	.....	1	.....	.....	.....	.....	2	.....	2	9
J. R. Brown.	Centre,.....	1	22	2	1	1	.....	27	.....	.....	.....	1	.....	1	2	29
Hilling, Lamb & Co.	Clearfield,.....	1	8	.....	1	.....	.....	9	.....	.....	.....	.....	1	.....	1	10
Wm. F. Holt & Co.	Clearfield,.....	1	12	.....	1	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	14
Stratton Bros.	Clearfield,.....	1	8	.....	1	.....	.....	10	.....	.....	.....	.....	1	.....	1	11
Penn Iron Co.	Clearfield,.....	1	32	.....	2	1	2	38	.....	1	.....	.....	1	.....	2	40
L. Milton Wilson.	Clearfield,.....	1	33	.....	3	2	.....	39	1	.....	.....	.....	1	.....	2	41
Schwinn, Bear Run, .....	Centre,.....	1	7	.....	1	.....	.....	9	1	.....	.....	.....	.....	.....	1	10
Total, .....	.....	2	49	.....	4	2	.....	48	2	.....	.....	.....	1	.....	3	51

Shoff No. 2, Townsend & Milsom.	1	13	2	.....	16	.....	.....	.....	.....	1	.....	1	17
Troy, Walker & Gleason.	1	8	1	.....	10	.....	.....	.....	.....	2	.....	2	12
Ophir No. 2, Jas. F. Stott.	1	14	1	.....	16	.....	.....	.....	.....	1	.....	2	18
White Oak, Lawton & Cox.	1	23	1	.....	4	.....	.....	.....	.....	.....	.....	1	30
Whiteside Nos. 1 and 2, S. J. Mountz.	.....	32	4	.....	36	.....	.....	.....	.....	1	.....	1	37
West Moshamon, Chas. D. Loraine.	1	22	1	.....	24	.....	.....	.....	.....	.....	.....	.....	24
Standard No. 4, J. R. Flenner & Co.	1	35	1	.....	37	.....	.....	.....	.....	.....	.....	.....	37
Acme Nos. 1 and 2, Victoria Mining Co.	1	174	10	3	5	.....	.....	.....	.....	2	4	2	204

## Recapitulation

Berwind-White Coal Mining Co.,	12	840	41	42	9	39	953	.....	11	20	2	14	28	75	1,058
Morrisdale Coal Mining Co.,	7	444	.....	34	16	61	562	2	5	10	2	6	13	38	600
Peale, Peacock & Kerr, Inc.,	5	578	5	26	10	2	625	.....	7	6	5	3	25	46	672
G. L. Whithead Coal Co.,	4	118	4	9	.....	.....	136	.....	.....	.....	.....	.....	.....	1	137
W. M. Whithead Coal Mining Co.,	5	118	4	10	3	.....	136	3	3	3	2	5	5	21	187
Wm. Gould & Bro. and Reakert Bros. & Co.,	5	129	4	12	2	.....	179	.....	.....	.....	.....	.....	.....	1	189
H. Liveright,	3	79	1	15	.....	.....	88	3	1	.....	.....	.....	.....	6	94
J. Swires and Ophir Coal Co.,	4	271	3	17	3	8	303	.....	4	5	3	12	7	31	334
Irish Bros. & Co.,	3	186	.....	16	6	21	232	.....	3	2	1	4	2	15	247
Forest Coal Mining Co.,	4	92	.....	4	3	.....	103	.....	1	1	.....	.....	5	6	109
John G. Platt Coal Mining Co.,	3	53	3	6	1	.....	66	.....	3	.....	.....	3	3	9	75
Henrietta Coal Co., Ltd.,	1	55	.....	4	.....	1	61	1	.....	.....	.....	.....	2	3	64
O. L. Schoonover,	1	44	1	6	.....	.....	52	2	1	.....	1	1	.....	5	57
Moshannon Coal Mining Co.,	1	33	.....	5	1	.....	41	1	.....	.....	.....	2	.....	3	44
American Union Coal Co.,	2	25	.....	2	.....	5	68	.....	1	.....	.....	2	.....	3	71
John Barnes & Sons,	1	145	4	3	1	.....	30	.....	.....	.....	.....	2	.....	3	33
Beech Creek Coal and Coke Co.,	1	145	4	10	3	8	171	1	3	2	2	2	8	18	189
Blair Bros. & Co.,	2	51	.....	4	.....	.....	57	.....	.....	.....	.....	.....	1	2	68
Blair Bros. & Co.,	2	51	.....	4	.....	.....	57	.....	.....	.....	.....	.....	1	2	68
Thos. C. Helms & Co.,	2	80	.....	7	2	1	68	1	.....	.....	.....	.....	1	2	7
Brown & Dwyer,	2	33	1	3	.....	.....	38	.....	2	.....	2	.....	2	2	105
Harbison Walker Co.,	3	72	4	.....	.....	5	84	.....	.....	.....	.....	.....	1	7	91
W. G. Fishburn,	1	62	9	7	1	4	84	.....	2	2	.....	2	6	12	96

## Recapitulation—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.
		Inside foremen or mine bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.	
Betz Coal Mining Co.,		1	48	...	2	3	1	53	2	...	...	1	...	...	...	60
Thos. Blythe,		1	104	...	...	...	...	115	...	...	...	2	...	...	...	120
Ghem Coal Co.,		1	108	...	...	...	...	116	...	...	...	...	...	...	...	111
W. Casker,		1	101	...	...	...	...	120	...	...	...	...	...	...	...	134
J. W. Hootten,		1	30	2	...	...	4	41	...	...	...	...	...	...	...	50
Samuel Styre,		1	40	...	...	...	...	44	...	...	...	...	...	...	...	54
Alder Run Colliery Co.,		1	45	...	...	...	2	51	...	...	...	...	...	...	...	44
Adams & Co.,		1	40	...	...	...	...	54	...	...	...	...	...	...	...	80
T. J. Lee Coal Co., Ltd., and Lee Coal Co.,		1	73	...	...	...	...	76	...	...	...	...	...	...	...	1
Coaldale Mining Co.,		1	16	...	...	...	...	19	...	...	...	...	...	...	...	3
W. J. Davis,		1	46	...	...	...	...	53	...	...	...	...	...	...	...	57
John Walton & Son,		1	18	...	...	...	...	22	...	...	...	...	...	...	...	23
H. M. Hughes & Son,		1	10	...	...	...	...	12	...	...	...	...	...	...	...	13
John and H. W. Todd,		1	12	...	...	...	...	14	...	...	...	...	...	...	...	15
Mapleton Coal Co.,		1	121	2	...	...	2	135	1	...	...	...	...	...	...	132
Meadowbrook Mining Co.,		1	16	1	...	...	1	22	...	...	...	...	...	...	...	23
J. R. Brown,		1	26	2	...	...	1	27	...	...	...	...	...	...	...	29
Hilling Lamb & Co.,		1	8	...	...	...	...	10	...	...	...	...	...	...	...	11
W. F. Holt & Co.,		1	12	...	...	...	...	14	...	...	...	...	...	...	...	11
Stratton Bros.,		1	8	...	...	...	...	10	...	...	...	...	...	...	...	11
Penn Iron Co.,		1	32	...	...	...	2	38	...	...	...	...	...	...	...	40
L. Milton Wilson,		2	40	...	...	...	4	48	2	...	...	...	...	...	...	51
Townsend & Milson,		1	13	...	...	...	...	16	...	...	...	...	...	...	...	17



[illegible]

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Berwind-White Coal Mining Co.,	.....	15.7	10.4	13.4	16.5	18.3	13	10.5	9.5	8.6	9.6	9.8	7.7	.....
Morrisdale Coal Mining Co.,	.....	17.3	19.4	21.6	16.3	14.9	11.3	17.7	14.8	14.6	14.3	16.7	15.6	.....
Pegle, Peacock & Kerr, Inc.,	.....	20.8	19.4	24.8	20.6	23	22.6	21	16.4	13.6	15.2	22.2	18.2	.....
G. L. Whitehead Coal Co.,	.....	19.3	12.5	16.8	14.3	12.6	11.1	15.3	13.8	16.6	16.1	14.6	11.5	.....
Cambria Coal Mining Co.,	.....	17.5	13.5	18	14.5	9.2	7.2	13.7	7	12.7	11.5	11.5	8.2	.....
W. A. Gould & Bro. and Reakert Bros. & Co.,	.....	15	11.6	16.2	15.6	12	11.6	14.6	14.2	14.2	17	16.6	10	.....
H. Liveright,	.....	12.5	9.2	13.2	9.2	7.75	8.7	9	7.2	11.75	14.7	11	15	.....
J. Swires and Ophir Coal Co.,	.....	18	12	13.7	14	9.5	7.5	9.2	8.5	8.7	6.2	12.2	11.7	.....
Irish Bros. & Co.,	.....	25.6	22.3	23	16.6	17.3	13.3	19	18	19	23.3	21.3	22.3	.....
Forest Coal Mining Co.,	.....	7.2	7	7.7	7.2	8	10.7	10.7	14.7	12	12	12.6	13.3	.....
John G. Platt Coal Mining Co.,	.....	8.3	8.3	8.3	8	8	4.3	3.6	3.3	3.6	2.6	2	1.3	.....
Henrietta Coal Co., Ltd.,	.....	9	10.5	9.5	8.5	9.5	9.5	9.5	9.5	8.5	8	18	17.5	.....
M. L. Schoonover,	.....	15	11.3	15	11	3	8.6	6.6	8.6	12	15	9.3	16.3	.....
Moshamont Coal Mining Co.,	.....	13.2	10.3	13	9	11.5	9	11.5	10.5	9.5	17	8.5	12.5	.....
John Barnes & Son,	.....	18	10.5	17	11	9	13	1	12	17	22	15	15	.....
Beech Creek Coal and Coke Co.,	.....	18	13.5	20.5	19	14.2	20.75	21	20.75	20.2	24.5	23	18.75	.....
M. & F. Craig,	.....	13.5	11.5	13	14	10	15	12.5	12.5	10	10	10	13	.....
Blair Bros.,	.....	20	20	20	20	18	17	17	21	24	23	22	18	.....
Thos. C. Heims & Co.,	.....	11.5	10	15.5	13	8	8.5	9.5	14.5	12	18.5	15.5	16.5	.....
Brown & Dwyer,	.....	16.5	11	15	15	12.5	15.5	15	15	11	11.5	12.5	19	.....
Harlison Walker Co.,	.....	20.5	19.5	20.5	21	21	15.5	20.5	20.5	20.5	20.5	22.5	22.5	.....
W. G. Fishburn,	.....	10	7.5	4.5	3.5	1.5	1.5	2	2	8	10	7.5	4	.....
Betz Coal Mining Co.,	.....	10	17	13	13	16	18	13	11	13	15	17.5	18	.....
Thos. Blythe,	.....	22.25	16	23.25	19.25	16	20.75	17.75	17.25	14.75	16.5	20.75	22.25	.....
Ghem Coal Co.,	.....	23.75	22	20.5	17.25	17.75	23	20.75	21	18.5	22.5	20.75	22.25	.....
Wendell Coal Co.,	.....	13.25	10.5	17.5	8.7	6	6.2	4.2	4.2	8.75	11.25	11.25	12.75	.....
W. H. Carter,	.....	21	13	10	10	20	11	13	14	28	23	24	24	.....
J. W. Ricketts,	.....	23	17	9	11.75	10	19	15	14	19	19	20	8	.....
Samuel Sayre,	.....	17	13	13	11	10	19	22	13	16	19	13	8	.....
Alder Run Colliery Co.,	.....	13	17	13	13	12.5	7.5	16	13.5	17.25	21.75	17	17	.....
Adams & Co.,	.....	16.5	21	26	9.5	19	22	23	21	19	23	18	22	.....
T. J. Lee Coal Co., Ltd. and Lee Coal Co.,	.....	22	9.5	15	11	12.5	5.5	12.5	9.5	11	3	7	14.5	.....
Coaldale Mining Co.,	.....	6.5	23	17	23	17	24	20	14	18	13	15	15	.....
W. J. Davis,	.....	8	12	18	13	20	9	8	18	16	.....	6	17	.....



TABLE IV.—List of fatal accidents that occurred in and about the mines of the Eighth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
28 Feb.	Albert Edw. Mathias.	English.	Miner boy.	14	S.	.....	.....	Morrisdale No. 1 shaft	Clearfield.	Fatally injured by mine cars.
3 June	Adolph Colander.	Swede.	Miner.	50	M.	.....	4	Coaldale No. 4.	Clearfield.	Fatally injured by a fall of coal.
31 Aug.	Edward Shink.	German.	R. R. car shifter.	28	M.	1	1	Ogle No. 5.	Clearfield.	Fatally injured by having been run over by a railway car.

TABLE V—List of non-fatal accidents that occurred in and about the mines of the Eighth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 13	Patrick Duggan, .....	Irish, .....	Miner, .....	55	M.	Lenore, .....	Clearfield, ..	Injured by a fall of slate.
23	Willard Anderson, .....	Swede, .....	Miner, .....	22	S.	Morrisdale No. 1 shaft, ..	Clearfield, ..	Injured by a fall of slate.
27	Wm. Bromalaw, .....	English, .....	Miner, .....	48	M.	Lane, .....	Clearfield, ..	Injured by a fall of slate.
Feb. 10	Mike Ratucio, .....	Italian, .....	Miner, .....	34	M.	Morrisdale No. 2 shaft, ..	Clearfield, ..	Fall of coal.
14	Lorenzo Baughman, .....	American, .....	Miner, .....	23	M.	Decatur No. 3, .....	Clearfield, ..	Fall of slate.
March 12	Martin Gable, .....	American, .....	Miner, .....	47	M.	Whem, .....	Centre, .....	Fracture of leg by fall of coal.
12	Chas. Miller, .....	American, .....	Miner, .....	25	M.	Webster No. 4, .....	Clearfield, ..	Fracture of leg by fall of coal.
26	Thomas Minto, .....	American, .....	Driver, .....	22	S.	Webster No. 24, .....	Clearfield, ..	Fracture of leg by fall of roof.
April 4	Charles Carlson, .....	Swede, .....	Driver, .....	28	S.	Summersville No. 8, .....	Clearfield, ..	Injured by cars.
4	Paul Bonyack, .....	American, .....	Driver, .....	27	M.	Eureka No. 19, .....	Clearfield, ..	Injured by cars.
May 26	Morgan Lewis, .....	Slav, .....	Miner, .....	37	M.	Eureka No. 16, .....	Clearfield, ..	Injured by cars.
June 9	Mike Chismas, .....	Slav, .....	Miner, .....	18	S.	Webster No. 4, .....	Clearfield, ..	Leg dislocated by fall of roof.
July 10	Harry Coonrod, .....	American, .....	Driver, .....	24	M.	Morrisdale No. 1 shaft, ..	Centre, .....	Leg fractured by fall of roof.
18	John A. Roach, .....	Slav, .....	Miner, .....	28	M.	Eureka No. 19, .....	Clearfield, ..	Leg fractured by fall of roof.
Sept. 21	Paul Turpick, .....	Slav, .....	Miner, .....	19	S.	Morrisdale No. 1 shaft, ..	Clearfield, ..	Leg fractured by fall of roof.
Oct. 4	Mike Turpick, .....	Slav, .....	Miner, .....	30	S.	Ashtman, .....	Clearfield, ..	Injured by cars.
19	Tony Leankrie, .....	Italian, .....	Miner, .....	30	S.	Summersville No. 8, .....	Clearfield, ..	Injured by cars.
Nov. 20	William Harris, St....	Polish, .....	Miner, .....	26	M.	Morrisdale No. 2 shaft, ..	Clearfield, ..	Injured by a fall of coal.
13	Thomas Pearson, .....	Hungarian, .....	Miner, .....	60	S.	White Oak, .....	Clearfield, ..	Injured by a fall of bone coal.
Dec. 23	Robt McClimat, .....	Scotch, .....	Miner, .....	29	M.	Decatur No. 4, .....	Clearfield, ..	Injured by a fall of coal.





# Ninth Bituminous District.

FAYETTE, ALLEGHENY, SOMERSET, BEDFORD, AND WESTMORELAND COUNTIES.

Connellsville, March 25, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: I have the honor of herewith submitting my annual report as Inspector of mines of the Ninth Bituminous District for the year ending December 31, 1901.

The quantity of coal mined was 9,144,543 tons, or 1,562,789 tons more than was mined in 1900. A change having been made in the districts accounts for the difference. The quantity of coke produced was 2,815,541 tons, or 584,388 tons more than in 1900. The change in the district accounts for this difference also, but this was a very prosperous year for mining. The number of fatal accidents was forty-one, or twenty more than for the previous year, and there were five more non-fatal accidents than in 1900. Twenty-four wives were made widows and fifty children made orphans by these casualties.

A brief description of the accidents is given with the causes. The mines are all in a fairly good condition, except a few in Somerset county, the conditions of which they are trying to remedy.

A description of all the mines in the district will be found with the statistical tables in their respective places. All of which is respectfully submitted.

BERNARD CALLAGHAN,  
Inspector.

## Summary of Statistics for 1901.

Number of mines in the district, .....	77
Number in operation during 1901, .....	73
Number of tons of coal produced, .....	9,144,543
Number of tons produced by pick mining, approximately, .....	6,492,876
Number of tons mined by machines, .....	2,652,667
Number of tons shipped, .....	5,512,179
Number of tons used for steam at mines, .....	148,449
Number of tons sold to employes and others, .....	57,294
Number of coke ovens, .....	6,284

Number of tons of coke produced, .....	2,815,541
Number of persons employed inside the mines, .....	8,916
Number of persons employed outside the mines, .....	3,081
Number of fatal accidents, .....	41
Number of tons of coal produced per fatal accident, .....	223,038
Number of non-fatal accidents, .....	42
Number of tons of coal produced per non-fatal accident, .....	217,727
Number of persons employed per fatal accident, ....	292
Number of persons employed per non-fatal accident, ..	285
Number of wives made widows, .....	24
Number of children orphaned, .....	50
Number of kegs of powder used, .....	41,531
Number of pounds of dynamite used, .....	28,936
Number of horses and mules, .....	1,128
Number of cylindrical boilers in use, .....	38
Number of tubular boilers in use, .....	161
Number of steam locomotives in use, .....	16
Number of air locomotives, .....	8
Number of electric locomotives, .....	15
Number of new mines opened, .....	2
Number of mines abandoned, .....	1

Production of Coal by Each Company in Tons During the Year 1901.

H. C. Frick Coke Company, .....	1,916,412
W. J. Rainey, .....	815,200
Cambria Iron and Steel Company, .....	395,994
Washington Coal and Coke Company, .....	824,753
J. R. Laughrey & Son, .....	151,800
Juniata Coke Company, .....	199,331
Marietta & Stillwagon, .....	60,730
Laing Sand and Coal Company, .....	10,055
Dunbar Furnace Company, .....	100,014
James Cochran Sons & Co., .....	99,321
Brown & Cochran, .....	314,500
Monongahela R. C. C. & C. Co., .....	183,787
United Coal Company, .....	48,370
Glassport Coal Company, .....	8,713
James W. Ellsworth & Co., .....	245,581
Lake Shore Gas Coal Company, .....	115,169
Pittsburg Coal Company, .....	2,069,992
Merchants Coal Company, .....	209,629
W. K. Niver & Co., .....	159,740
Ehlen Brothers, .....	35,100

Chapman Coal Company, .....	89,790
Fairview Coal Company, .....	18,750
Grassy Run Coal Company, .....	60,565
G. W. Duncombe, .....	65,324
Continental and Elk Lick, .....	299,429
H. J. Willmoth, .....	28,702
Benjamin Thomas, .....	12,304
Continental Coal Company, .....	115,660
Cumberland & Summit Coal Company, .....	131,795
Casselman Coal Company, .....	64,477
W. A. Merrill & Co., .....	41,519
W. D. Althouse & Co., .....	73,335
Pine Hill Coal Company, .....	70,493
Smokeless Coal Company, .....	30,300
Stoner Coal Company, .....	15,844
Spiah & Read, .....	4,563
Enterprise Coal Company, .....	16,480
Ursina Coal Mining Company, .....	22,886
Rockwood Coal Mining Company, .....	6,656
Viaduct Coal Company, .....	10,920
Savage Fire Brick Company, .....	460

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Total, .....	9,144,543
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The total production was made up as follows:

Somerset, .....	1,584,278
Fayette, .....	5,496,092
Allegheny, .....	1,477,682
Westmoreland, .....	586,031
Bedford, .....	460

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Total, .....	9,144,543
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#### Recapitulation.

Shipped to market, .....	5,512,179
Used for steam and heat at mines, .....	148,449
Sold to local trade and employes, .....	57,294
Used for coking, .....	3,426,621

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Total, .....	9,144,543
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TABLE A—Showing Production of Coal, Number of Persons Employed by Each Company During the Year 1901, and the Average Number of Tons Produced per Employee.

Names of Operators.	Number of tons produced.	Number of persons employed.
H. C. Frick Coke Co., .....	1,916,412	2,352
W. J. Rainey, .....	815,200	1,320
Pittsburg Coal Co., .....	2,069,992	2,372
Monongahela River Coal Co., .....	183,787	343
Washington Run Coal and Coke Co., .....	824,753	1,128
J. R. Laughrey & Son, .....	151,800	93
James Cochran & Co., .....	99,321	95
Merchants Coal Co., .....	209,629	240
Continental and Elk Lick Coal Co., .....	239,429	350
Lake Shore Gas Coal Co., .....	115,169	145
James W. Ellsworth & Co., .....	245,581	255
United Coal Co., .....	48,370	165
Juniata Coke Co., .....	199,331	245
Marietta & Stillwagon, .....	60,730	47
Glassport Coal Co., .....	8,713	23
H. J. Willmoth, .....	28,702	64
W. K. Niver & Co., .....	159,740	200
Benjamin Thomas, .....	12,304	14
Casselman Coal Co., .....	64,477	121
Chapman Coal Co., .....	89,790	93
Spiah & Read, .....	4,563	14
W. A. Merrill & Co., .....	41,519	74
Stoner Coal Co., .....	15,844	25
S. F. B. Co., .....	460	7
Rockwood Coal Co., .....	6,656	12
W. D. Althouse & Co., .....	73,335	127
Cumberland and Summit, .....	131,795	216
Pine Hill Coal Co., .....	70,493	128
Glen McLaren, .....	115,660	195
Brown & Cochran, .....	314,500	302
Hamalton Duncombe, .....	65,324	100
Grassy Run, .....	60,565	79
Dunbar Furnace Co., .....	100,014	148
Ursina Coal Mining Co., .....	22,886	70
Cambria Iron Steel Co., .....	395,994	614
Laing Sand and Coal Co., .....	10,055	14
Williams, .....	16,480	22
Darlington, .....	10,920	8
Smokeless Coal Co., .....	30,300	40
Fairview Coal Co., .....	18,750	24
Ehlen Brothers, .....	35,100	72
Average production in tons per employe, 762.8, .....	9,144,543	12,001



TABLE B—Number of Fatal Accidents and Tons of Coal Produced per Life Lost.

Names of Operators.	Number of fatal accidents.	Number of tons of coal produced per life lost.
H. C. Frick Coke Co., .....	8	239,551
Pittsburg Coal Co., .....	11	188,181
W. J. Rainy, .....	5	163,181
Cambria Steel Co., .....	2	197,997
Washington Run Coal and Coke Co., .....	3	274,917
W. A. Merrill, .....	4	45,757
Monongahela River Coal and Coke Co., .....	4	45,946
Brown & Cochran, .....	1	314,590
Juniata Coke Co., .....	1	199,331
Casselman Coal Co., .....	1	64,081
W. K. Niver & Co., .....	1	159,740
Merchants Coal Co., .....	1	219,629
Spiah & Reed Co., .....	1	4,563
Total and average, .....	41	.....

TABLE C—Showing the Number of Fatal and Non-Fatal Accidents, and the Number of Tons of Coal Produced per Accident.

Names of Operators.	Number of accidents.	Number of tons of coal produced per accident.
H. C. Frick Coke Co., .....	18	106,489
Pittsburg Coal Co., .....	21	98,571
W. J. Rainy, .....	5	163,046
Cambria Steel Co., .....	3	131,998
Washington Run Coal and Coke Co., .....	4	206,158
W. A. Merrill & Co., .....	3	13,839
Monongahela River Consolidated Coal and Coke Co., .....	6	30,631
Brown & Cochran, .....	2	157,230
Juniata Coal Co., .....	2	99,696
Casselman Coal Co., .....	1	64,081
W. K. Niver & Co., .....	3	53,246
Merchant Coal Co., .....	2	109,814
Spiah & Reed Co., .....	1	4,563
James W. Ellsworth & Co., .....	2	122,790
Glen McLaren, .....	1	115,660
Jas. R. Laughrey & Son, .....	1	150,000
Fair View Coal Co., .....	1	35,100
Cumberland and Summit, .....	1	131,795
Chapman, .....	2	44,895
W. D. Althouse & Co., .....	2	36,676
Marietta & Stillwagon, .....	1	60,730
Dunbar Furnace Co., .....	1	100,014
Total and average, .....	83	2,037,041

TABLE D—Classification of Accidents.

Classification of Accidents.	Killed or fatally injured.	Injured.	Total.
Falls of slate, .....	14	24	34
Coal, .....	3		3
Falls of roof, coal and slate, .....	18	7	25
Wagons, .....	6	11	17
Powder, .....	2		2
Electric shock, .....	1		1
Rope, outside, .....		1	1
Total, .....	41	42	83

TABLE E—Occupations.

Occupations.	Killed or fatally injured.	Injured.	Total.
Miners, .....	36	32	68
Drivers, .....	3	5	8
Laborers, .....	1	2	3
Helper, .....	1		1
Trapper, .....		1	1
Greaser, .....		1	1
Cager, .....		1	1
Total, .....	41	42	83

TABLE F—Nationalities of Persons Killed and Injured.

Nationalities.	Killed or fatally injured.	Injured.	Total.
Slavs, .....	13	11	24
Austrians, .....	2	1	3
Irish, .....	3	1	4
German, .....	1	3	4
Americans, .....	11	14	25
French, .....	1		1
Poles, .....	1	4	5
Hungarians, .....	3	3	6
English, .....	3	3	6
Russians, .....		1	1
Italians, .....	5	1	6
Total, .....	41	42	83

Names of Operators.	Name of collieries.	Number of persons employed per day.	Method of ventilation.	Number of separate splits of air.	Cubic feet of air per minute at face of working.	Inlet.	Cubic feet of air at outlet.	Number of tons mined by machines.	Power used.	Thickness of seam—feet.	Kind of opening.
C. Erick Coke Co.,	Adelaide,	200	Fan.	4	9,000	105,000	108,270	...	...	9	Slope.
H. H. H. C. Erick Coke Co.,	Henry Clay,	63	Fan.	2	9,750	39,400	41,000	...	...	9	Slope.
H. H. H. C. Erick Coke Co.,	Davidson shaft,	250	Fan.	4	7,120	71,400	73,420	...	...	9	Shaft.
H. H. H. C. Erick Coke Co.,	Leisenring No. 1,	245	Fan.	4	12,400	131,200	135,750	...	...	9	Shaft.
H. H. H. C. Erick Coke Co.,	Leisenring No. 3,	300	Fan.	6	13,900	100,440	106,420	...	...	9	Shaft.
H. H. H. C. Erick Coke Co.,	Grace,	329	Fan.	6	12,900	102,480	106,740	...	...	9	Shaft.
W. J. Rainey,	Fort Hill,	125	Fan.	2	6,000	44,900	48,270	...	...	9	Drift.
W. J. Rainey,	Paul,	190	Fan.	3	7,000	60,300	61,270	...	...	9	Drift.
W. J. Rainey,	Elm Grove,	205	Fan.	4	12,000	142,250	144,000	...	...	9	Drift.
W. J. Rainey,	Juniauta,	114	Fan.	2	14,000	45,000	49,370	...	...	9	Drift.
Washington Coal and Coke Co.,	Washington No. 1,	450	Fan.	10	20,000	173,800	184,000	...	...	9	Drift.
Washington Coal and Coke Co.,	Washington No. 2,	270	Fan.	6	15,000	139,850	143,000	...	...	9	Drift.
Washington Coal and Coke Co.,	Ferry,	75	Fan.	6	4,200	33,200	36,270	...	...	9	Drift.
Cambridge Iron and Steel Co.,	Mahoning,	14	Fan.	1	2,100	76,270	79,330	...	...	9	Drift.
Cambridge Iron and Steel Co.,	Atlas,	15	Fan.	1	3,000	3,000	3,000	...	...	9	Drift.
Cambridge Iron and Steel Co.,	Whitely,	40	Fan.	1	2,000	5,000	5,000	...	...	9	Drift.
Cambridge Iron and Steel Co.,	Ferguson,	85	Fan.	1	10,080	94,000	92,485	...	...	9	Drift.
Cambridge Iron and Steel Co.,	Furnace,	18	Fan.	1	4,380	18,400	18,420	...	Compressed air.	5	Drift.
James Cochran & Co.,	Charlesa,	50	Furnace,	1	7,000	13,000	13,270	...	...	9	Drift.
Brown & Cochran,	Nellie,	180	Fan.	3	16,200	42,000	43,720	...	...	9	Drift.
J. R. Laughrey & Son,	Victoria,	80	Fan.	3	12,000	63,640	63,270	...	Compressed air.	9	Drift.
Laing & Swisson,	B. & O.,	15	Fan.	1	2,240	12,800	12,900	...	...	9	Drift.
Laing & Swisson,	Rassel,	9	Natural,	1	1,000	4,500	4,500	...	...	9	Drift.
Pittsburg Coal Co.,	Whitsett,	150	Fan.	2	5,000	36,280	38,000	...	...	9	Drift.
Pittsburg Coal Co.,	Banning No. 1,	250	Fan.	2	9,200	71,000	73,000	...	Electricity.	8	Drift.
Pittsburg Coal Co.,	Banning No. 2,	190	Fan.	1	9,200	21,200	21,400	...	Compressed air.	8	Drift.
Pittsburg Coal Co.,	Wick Haven,	200	Fan.	4	8,400	61,600	62,730	...	Compressed air.	8	Shaft.
Pittsburg Coal Co.,	Wart,	165	Fan.	4	14,200	68,750	70,000	...	...	8	Shaft.
Pittsburg Coal Co.,	Wart No. 1,	165	Fan.	2	12,600	28,810	29,100	...	Electricity.	7	Shaft.
Pittsburg Coal Co.,	Ocean No. 5,	225	Furnace,	2	10,800	40,000	41,000	...	Electricity.	6	Drift.
Pittsburg Coal Co.,	Sarah,	125	Fan.	2	9,000	21,200	21,800	...	Electricity.	6	Drift.
Pittsburg Coal Co.,	Ocean No. 2,	200	Fan.	2	11,000	65,780	66,000	...	Electricity.	6	Drift.
Pittsburg Coal Co.,	Ocean Nos. 3 & 4,	67	Fan.	1	7,000	9,800	10,840	...	Electricity.	5	Drift.
Pittsburg Coal Co.,	Painter & Cunell,	115	Furnace,	1	8,120	23,000	24,250	...	Electricity.	5	Drift.

Names of Operators.

## Names of Operators.

Names of Operators.	Name of collieries.	Number of persons employed per day.	Method of ventilation.	Number of separate splits of air.	Cubic feet of air per minute at face of working.	Cubic feet of air at inlet.	Cubic feet of air at outlet.	Number of tons mined by machines.	Power used.	Thickness of seam—feet.	Kind of opening.
Jas. W. Ellsworth & Co.,	Forrest Hill,	225	Fan, .....	4	9,720	80,780	82,960	204,551	Electricity.	.....	Drift.
Lake Shore Gas Coal Co.,	Dravo, .....	130	Furnace, .....	2	2,500	30,000	31,000	100,049	Electricity.	.....	Drift.
W. K. Niver & Co.,	Pen-Mar, .....	175	Fan, .....	2	3,200	25,200	27,140	103,100	Electricity.	.....	Drift.
Ehien Brothers, .....	Tub Mill run, .....	72	Furnace, .....	2	1,000	12,000	12,960	.....	.....	.....	Drift.
Merchants' Coal Co.,	Merchant No. 1, .....	60	Natural, .....	1	2,400	8,000	8,000	.....	.....	.....	Drift.
Merchants' Coal Co.,	Merchant No. 2, .....	111	Natural, .....	1	6,000	34,000	34,280	151,299	Electricity.	.....	Drift.
Merchants' Coal Co.,	Merchant No. 3, .....	69	Fan, .....	1	2,000	12,000	12,700	.....	.....	.....	Drift.
Chapman's Coal Co.,	Chapman, .....	88	Natural, .....	1	1,800	7,000	7,000	.....	.....	.....	Drift.
Grassy Run Coal Co.,	Grassy Run, .....	74	Natural, .....	1	1,720	7,200	7,200	.....	.....	.....	Drift.
Fair View Coal Co.,	Fairview, .....	21	Natural, .....	1	1,400	1,400	1,350	.....	.....	.....	Drift.
G. H. Duncombe, .....	Hamilton, .....	109	Fan, .....	1	6,000	40,000	40,720	.....	.....	.....	Drift.
Continental Coal Co.,	Green McLaren, .....	283	Furnace, .....	2	7,800	28,000	29,780	.....	.....	.....	Drift.
Cumberland & Elk Lick Coal Co.,	Shaws No. 1, .....	28	Fan, .....	1	10,200	58,400	59,920	.....	.....	.....	Drift.
Cumberland & Elk Lick Coal Co.,	Shaws No. 2, .....	88	Natural, .....	1	2,000	5,500	5,700	.....	.....	.....	Drift.
H. J. Willmoth, .....	Willmoth, .....	64	Natural, .....	1	2,000	2,000	2,000	.....	.....	.....	Drift.
Benjamin Thomas, .....	Thomas, .....	14	Natural, .....	1	7,200	17,920	17,920	.....	.....	.....	Drift.
Cumberland and Summit Coal Co.,	Summit, .....	216	Natural, .....	4	2,340	5,000	5,000	.....	.....	.....	Drift.
Casselman Coal Co.,	Casselman, .....	121	Fan, .....	1	6,800	8,400	8,400	.....	.....	.....	Drift.
W. A. Merrill & Co.,	Enterprise, .....	74	Furnace, .....	1	2,800	14,400	15,280	.....	.....	.....	Drift.
W. D. Althouse & Co.,	Pontefigh, .....	54	Fan, .....	1	4,200	21,320	21,320	.....	.....	.....	Drift.
Pine Hill Coal Co.,	Allesheny, .....	86	Fan, .....	2	2,700	18,500	20,090	15,704	Compressed air, .....	.....	Slope
Stoner Coal Co.,	Lottie No. 1, .....	128	Fan, .....	1	5,400	15,000	15,000	.....	.....	.....	Drift.
Grace Coal Co.,	Berlin, .....	25	Furnace, .....	1	500	1,000	1,000	.....	.....	.....	Drift.
Waco Coal Co.,	Grace, .....	32	Furnace, .....	1	500	1,000	1,000	.....	.....	.....	Drift.
Waltersberger & Co.,	Darlington, .....	7	Natural, .....	1	2,700	2,700	2,700	.....	.....	.....	Drift.
Enterprise Coal Co.,	Rockwood, .....	11	Natural, .....	1	None.	None.	None.	.....	.....	.....	Drift.
Spiyah & Reed, .....	Williams, .....	26	Natural, .....	1	None.	None.	None.	.....	.....	.....	Drift.
Ursina Coal Co.,	Reed, .....	13	Natural, .....	1	6,000	12,800	12,900	.....	.....	.....	Drift.
Consolidated Coal and Coke Co.,	Reed, .....	70	Natural, .....	1	10,000	14,000	14,000	.....	.....	.....	Drift.
Consolidated Coal and Coke Co.,	Brown's No. 2, .....	29	Furnace, .....	1	8,000	37,000	38,000	.....	.....	.....	Drift.
Consolidated Coal and Coke Co.,	Belle Bridge, .....	152	Furnace, .....	4	5,000	23,000	23,100	79,700	Electricity.	.....	Drift.
Consolidated Coal and Coke Co.,	Lovedale, .....	38	Furnace, .....	1	5,000	20,000	21,000	.....	.....	.....	Drift.
Consolidated Coal and Coke Co.,	Gospel, .....	124	Furnace, .....	3	9,000	17,000	17,920	41,767	Electricity.	.....	Drift.
United Coal Co.,	United, .....	165	Furnace, .....	2	9,600	20,000	21,000	38,648	Electricity.	.....	Drift.
								2,652,667			



## Annual Examination for Mine Foremen and Fire Bosses.

The annual examination of applicants for certificates of qualification for mine foreman and fire bosses was held in Connellsville, January 2, 3 and 4, 1901.

The board of examiners was Bernard Callaghan, Mine Inspector; Clair Stillwagon, superintendent; John Stevenson, mine foreman.

Ninety-four applicants appeared before the board for examination; forty-seven for mine foreman and forty-seven for fire boss, of this number twenty-six passed successfully for mine-foreman, and twenty-seven for fire bosses, who received certificates.

Mine Foremen: David Ainslie, Dunbar; Harry Coll, Connellsville; James M. Murtland, Bradford; Robert Shaw, Uniontown; F. E. King, Leisenring; David Jones, Suterville; Robert Louther, Vanderbilt; Thomas Keef, Trotter; Thomas Gray, Oliver; Patrick McCabe, Leisenring; Richard Clyde, Smithdale; Alfred Jones, Connellsville; Robert Hailes, Mount Pleasant; Patrick King, Leisenring; Dennis Smith, Punxsutawney; William McCleary, Pennsville; C. M. Gates, Leisenring; James W. Lindsay; John L. White, Punxsutawney; William McGregor, Brownsville; Harry Philmore, Ruffsdales; Robert McInnis, Wheeler; Martin Brennan, Blairsville; Samuel Campbell, Latrobe. Second Grade, Patrick Murphy, Whittset.

Fire Bosses: David Laing, Summit; James McMullen, Trotter; Henry Fox, Wick Haven; William Hennessy, Leisenring; Thomas Leman, Vanderbilt; John S. Patterson, Jacobs Creek; Edward Lee, Jacobs Creek; John Payton, Trotter; P. S. Bradley, Dunbar; William J. Kite, Douglass; John Smith, Leisenring; James Welling, Vanderbilt; David Watkins, New Haven; Bart Murphy, Tarrs; Peter Lacey, Oliver; Joseph Morgan, Broad Ford; Jacob Engel, Broad Ford; Thomas Moran; Trotter; P. J. Callaghan, Tarrs; M. J. Doyle, Tarrs; James Pancoast, Smithton; William Ritchie, West Newton; John McDonald, Connellsville; S. B. Steffey, Valley; Martin McNulty, Valley; H. J. McArdle, Broad Ford; John J. Angus, Mount Pleasant.

## Remarks on Accidents.

Steve Borts was instantly killed by a fall of slate January 14. He was knocking out posts from under it when a portion of it fell on him.

Michael Carrigan was fatally injured by a truck running over him January 14; he slipped and fell under it; died next day.

George Jubes was instantly killed by a fall of roof, coal and slate February 4. He neglected to properly post the place.

Mike Stullet was instantly killed by a fall of roof February 9. He and his partner were just commencing to knock out the posts when it



fell on him. There was no one near but his partner who had to run out of the mine for the mine foreman, and it was some time before he could get enough men to go in the mine, when they found his body.

Joseph Smith was fatally injured March 12, by a fall of coal, roof and slate. He commenced to knock out the posts for the purpose of making a fall but was caught by part of it. He died next day.

Clarence Thompson, driver, was instantly killed March 14, by being run over by cars. It was his custom to go down the entry with the trip and put the wagons in their right places, but he slipped and so lost his life.

Peter Lestruet, miner, was instantly killed April 23, by a fall of roof, while he was knocking out posts. He was considered a very careful miner, but the work of knocking out posts seems to be the cause of the death of a great many men.

Robert Heck was instantly killed April 30, by a fall of roof while knocking out posts.

Joseph Bowden was instantly killed May 20, by a fall of roof and slate. There was a water crack in roof that could not be seen, which allowed it to fall, swinging the posts out.

Adam Subliska was instantly killed May 24, by a fall of slate that he had no reason to be under. The coal was all loaded and this one piece only was to be taken down and moved, and he went under it just as it fell.

Mike Lischko was instantly killed May 31, by a fall of roof while taking out stumps. He and Frank Kosach were working together and they went back to take out a stump, in order to make a fall, and had struck it only a few times when the whole roof fell on them killing them instantly.

John Singek was instantly killed June 6, by a fall of roof, coal and slate. He was taking out pillars on the north side where the coal was greatly squeezed, and it fell so suddenly around him that he did not have time to get out.

Martin Steka, driver, was instantly killed June 10, by being run over by the front wagon of his trip.

Antonia Ferrell was instantly killed June 19, by a fall of slate in his room. It was a very small piece that fell on him, and did not look very dangerous.

Paul Levo was instantly killed June 24, by a fall of slate. The Italians had a big holiday on Sunday, and on Monday he came to the mine and went under slate that he should have known was dangerous.

Mike Kroteka was instantly killed June 24, by a fall of roof. The place seemed to have been sufficiently posted, but the roof was fractured too much for the number of posts he had under it.

Elmer Dagata was instantly killed July 5, by a fall of roof. This was the first fall he had in taking back the pillar, and he was taking

out the posts and had nearly all out; he was warned of the danger, but did not heed the warning.

Andy Taska was instantly killed July 9, by a fall of roof and coal. This was carelessness, for he saw the danger.

Ralph Speelman was instantly killed July 9. This happened by the boy standing where he should not have been, and one of the loaded wagons bumped against another knocking it against the rib side where he was standing, killing him instantly.

George Carilla was instantly killed by a fall of roof July 22. He was taking out a back stump and thought he was safe in having a number of posts under the roof, but he had dug only a little off the stump, when it fell on him.

Sander Copeland was instantly killed July 26, by a fall of slate. He was working in an entry, had all the slate taken down but one piece, which he thought was safe. He went under it to do some work when it fell on him.

Joseph Seddenger was fatally injured August 14. This boy was working with his father, and the room adjoining was worked nearly through. The man in the next room drilled a hole on the rib next to them for the purpose of firing a shot; they knew it would be unsafe for them if the shot was fired while they were in their places, but they depended on him to give them warning when he lit the fuse, which he said he did, but the boy was near the place when the shot was fired, which injured him so that he died same day.

Alexander Hampfield was fatally injured August 20, by a fall of slate in his room. This happened by not having the posts set under the slate in the proper places. The posts they depended on were at the edge of it and the weight of the slate swung it over. He died next day.

John Bolish was instantly killed September 5. He was carrying a drill scraper on his shoulder, and came in contact with the live wire.

Salvadore Desmone was instantly killed by a fall of roof September 6. He had the pillar drawn out far enough, but there was a small stump left, and he thought by taking this out it would be complete, but the first stroke of his pick loosened it enough to allow all of the roof to fall on him. It took six hours to get his body out.

John Murry was instantly killed by a loaded wagon on the tippie September 10. The deceased was on the tippie when a wagon was coming down the incline which ran off the track, and in putting it on again it got loose from the rope, and struck another wagon knocking it against Murray, instantly killing him.

Andrew Lazinski was instantly killed by a fall of roof coal Sep-

tember 16. This accident happened when he had his wagon nearly filled, when a piece of coal fell on him.

Cassimer Devedis was instantly killed October 1, by a fall of slate, this happened by his not having sufficient posts under it.

Carl Y. Arithout was instantly killed by a fall of fire clay October 2. In this seam there are two feet of fireclay between two feet of coal above and below, and while taking out some coal on the lower part, a piece of fireclay fell on him.

Latzie Popovish was instantly killed by a fall of slate October 12, for want of sufficient posts being set.

Andy Ferko was fatally injured by a fall of slate October 14. Another case of carelessness in not posting.

John Eardick was instantly killed by a fall of roof October 21. This was considered an unavoidable accident, as every precaution had been used in taking out a pillar.

Andy Olekza was instantly killed by a fall of roof October 21. This was caused by neglect in not posting.

Steve Popobisha was fatally injured by a blown out shot October 26. This accident happened by his not making a proper cartridge; he was putting it in the drill hole when it burst, and having his open light near, some of the powder fell on it, causing it to explode the whole cartridge. He died next day.

Oliver Claigg was instantly killed by a fall of slate November 7. He was preparing to fire a shot, and everything looked safe, but a piece of slate had been cracked over the coal which fell on him.

John Voboschoe was fatally injured November 8, by a fall of roof. He was taking out posts and had nearly all of them out when the roof fell on him injuring him so that he died next day.

Charles McCarty was fatally injured December 12, by being caught between the rib and cars. This accident happened by giving too much force to the brake which caused him to lean too far out. He died eighteen days after.

Robert Walker was fatally injured by a fall of slate December 17. This was an unavoidable accident, as the place seemed safe. He died same day.

Wm. M. Brown was instantly killed December 18. He had fired a shot in the coal and seeing that the roof was unsafe to work under, he commenced to prepare a place for posts, when it fell on him.

Ross Trunce was instantly killed by a fall of slate and coal December 26; it looks as if there had been no precautions taken.

## Cottage State Hospital, Connellsville, Pa.

Number in-patients treated from June 1, 1900, June 1, 1901, .....	385
Number out-patients treated from June 1, 1900, June 1, 1901, .....	62
Total number patients treated from June 1, 1900, June 1, 1901, .....	447
Aggregate number of days in-patients treated, .....	11,359
Number visits of out-patients to hospital, .....	93
Number patients recovered, .....	247
Number died, .....	47
Number improved, .....	52
Number remaining, .....	39

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The average number of in-patients treated, thirty-one per day.

Of this number, 447, there were ninety-seven miners.

Of this number of miners were eighty-four foreigners and thirteen Americans.

Number in-patients treated since June 1, 1899-June 1, 1900, .....	342
Number out-patients treated since June 1, 1899-June 1, 1900, .....	49
Total number of patients treated since June 1, 1899-June 1, 1900, .....	391
Aggregate number of days in-patients were treated, .....	9,639
Number visits of out-patients to hospital, .....	75
Number patients recovered, .....	251
Number improved, .....	26
Number died, .....	29
Number remaining, .....	36

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The average number of in-patients treated, twenty-seven per day.

Of this number, 391, there were 129 miners.

Of this number of miners 114 were foreigners and fifteen were Americans.

## Description of Mines.

## Mines on the P. &amp; L. E. R. R.

Adelaide.—Is an extensive mine and is in very good condition, both as to ventilation and drainage. The improvements made during the previous year are giving good results.

Fort Hill.—Everything in this mine is in good condition, both as to ventilation and drainage.



Paul.—Is a very extensive mine and needs good care, which it has.

Nellie.—Everything is very favorable in this mine at present. There was a fire from spontaneous combustion about three years ago; the mine was sealed up then, now they are getting the coal out where the fire was and there are no signs of fire. They have made a new opening for haulage purposes, which makes it like a new mine.

Clarissa.—The natural condition of this mine is such that it is enough to say it is all right.

Washington Run Nos. 1 and 2.—These mines are in good condition, as to ventilation and haulage, and produce large outputs of coal.

Victoria.—This is the first year this mine has been worked; it is a new mine and is worked on the same principle as Washington Nos. 1 and 2.

Perry.—Belongs to the same company as Washington Nos. 1 and 2. They purchased it one year ago, and it is being improved fast. They have installed a new fan, which gives good results; drainage is very good.

Whittset.—Formerly called Rainbow. This mine is being improved which will put it in good condition.

Banning No. 2.—Is a new opening, which has been cut into Wick Haven for the purpose of reaching the coal to a better advantage. They have installed a large Capell fan, which will ventilate Whittset and the other two mines.

Wick Haven.—Has had a good record this year, the miners having been careful in taking out roof and entry pillars, thus preventing accidents.

Banning No. 1.—Is in good condition. They have advanced the entries well, and put in an extra motor, which has increased the output greatly.

Darr.—Is an extensive mine, and is in fairly good condition all the way through, but will be better when they have the butt entry off No. 15 flat, driven to daylight.

West Newton Shaft.—Is advancing well in the new coal field, but gives some trouble in ditching the local swamps.

Ocean No. 5.—There is some trouble at this mine by local swamps and bad roof. Ventilation is fairly good and is by furnace, but they intend to put in a fan.

Forrest Hill.—This mine is being gotten into better condition for a larger output. Ventilation and drainage are fairly good.

Sarah.—Is a small mine, but it will only be a short time until it is an extensive one, as they are getting away from the unevenness of the coal and grades. They installed a Clark fan this year, which will increase the ventilation.

Ocean Nos. 2 and 3.—Are operated by the same ventilating power. They are in fairly good conditions and well looked after.



Painter and Cornell.—Has been improved some in ventilation, but needs a little more.

Dravo.—The ventilation and drainage are a little better; the conditions at present look as though they will be improved.

Brown Nos. 1 and 2.—There has been very little work done this year in these mines. They are driving entries to Lovedale, which will connect them. They are putting up a large fan and electric power plant.

#### Mines on the Belle Vernon Railroad.

Belle Bridge.—Ventilation and drainage are in good condition in this mine where the rooms are worked, but in the other opening where nothing but entries are worked, it is not very good until daylight is reached at the outcrop.

United.—Is a new opening, and there is a good opportunity for keeping the ventilation and drainage in good condition.

Lovedale.—Is working only two entries night and day, to connect with Browns No. 2.

Gospel.—The most of the year has been spent in making improvements and it is now in good condition.

Horner & Roberts.—Has not worked any this year.

Glassport.—They do not ship any coal, it is all custom coal. Ventilation and drainage are good.

#### Mines Near Connellsville.

Trotter.—Is well attended to and in good condition.

Leisenring No. 1.—Is in good condition. They have two compressed air locomotives inside to haul the coal, which are giving good results.

Leisenring No. 3.—Ventilation and drainage are in good condition. There is a very heavy cover over the coal, which fractures the roof in some places, but making a change in the length of the room, will overcome this.

Elm Grove.—Is in good condition as to ventilation and drainage.

Juniata.—Has a good record for ventilation and drainage.

Davidson Shaft.—Is in good condition regarding ventilation and drainage, but they are having some trouble with local swamps.

Henry Clay.—Is in good condition for mining, ventilation and drainage.

Coal Brook.—There is nothing to complain of in regard to ventilation and drainage.

Grace.—This is a convenient mine for getting a large output of coal. Ventilation and drainage are very good.

Wheeler.—This mine will soon be worked out of solid coal. They have a considerable number of room and entry pillars to extract. Ventilation and drainage are fairly good.

Morell.—This mine is entirely exhausted.

Atlas and Mahoning.—Are connected inside, and look like one mine. Conditions are fairly good.

Ferguson.—Has been driven to its boundary lines on all sides, and is now on the retreat, but has over a mile of territory to come back. Ventilation and drainage are good.

Furnace Mine.—Is working the Freeport E seam. Considerable expense has been put on improvements at this place, for the purpose of handling and cleaning coal to make coke.

Soisson Mine.—Is a small mine and does not come under the law. Ventilation and drainage are good.

Baltimore and Ohio Mine.—The working of this mine is all on the other side of the river. The conditions are good with necessary ventilation and drainage.

#### Mines in Somerset County.

Reed Mine.—Is a new opening, working one of the lower seams called B. There are four feet of clean coal, but there are two feet of fireclay in the middle of it. Conditions for ventilation and drainage are good.

William Mine.—Is a small mine; so far they are working one of the lower seams called C. There are four feet of clean coal without any slate, and I might add they are without any ventilation.

Rockwood.—Is a new opening on the B seam. The conditions of this mine are fairly good.

Viaduct.—Is also working the B seam with slate in the middle, and no ventilation. There are not enough of men employed to bring it under the mining law.

Rosebud.—This is the only mine at Ursina. The coal, although one of the barren measures, is six and seven feet thick, with no slate in it. Ventilation and drainage are good.

Casselman. —This mine is fairly good as to ventilation and drainage. The entries are not far enough in advance to maintain a large output.

#### Salisbury Branch.

Pen Mar.—This is an old mine, but it will not last much longer, as they are at the boundary line now, with not much solid coal to work. Ventilation and drainage are good.

Tub Mill Run.—At present has good ventilation and drainage. With its two openings there is very little solid coal to work.

Merchants Nos. 1, 2, and 3.—No. 1 is exhausted unless they take out the entry pillars. No. 2 has very little solid coal to work, but has good ventilation and drainage. At No. 3 there is trouble with local swamps, but they expect to be over them soon.

Chapman.—Will soon be exhausted. In my visits I found the conditions fairly good.

Fairview.—Is working the upper seam four feet thick. The Pittsburg seam being all worked from under it, causes an odd state of affairs. The falls are frequent, and blackdamp issuing from them makes it dangerous and unhealthful.

Grassy Run.—Is in good condition with natural means of ventilation. The difference of elevation is the chief cause, and also for drainage.

Hamilton.—Has both fan and furnace and is well equipped for ventilation.

Wilmoth.—Is working the big seam and also the four feet. The big seam is in good condition as to drainage and ventilation but the four feet seam needs attention.

Glen Maclaren.—Is working the big seam, and four foot seam. They have furnace ventilation in big seam and have none to spare, but they have a good fan at the other seam and have more than sufficient.

Thomas.—Was in good condition with only a few persons working inside.

Shaws No. 1.—Is a very extensive mine, capable of handling a large output of coal. The ventilation needed to be increased and could be were attention given to the overcasts and stopping. No. 2 is a new opening and did not come under the law at my last visit.

Cumberland.—In this mine the ventilation has been neglected. If a trap door were opened it remained open unless the party who opened it attended to it. They are working the four foot seam without any ventilation, but I will see that they will not do so very long.

Enterprise Nos. 1 and 2.—No. 2 has not a sufficient number of men to come under the law. No. 1 has and was in fairly good condition at my last visit.

Ponfeigh.—Is not one of the best equipped mines as to ventilation; they have a poor fan and it is in a poor place to ventilate an extensive mine. The grade is steep enough to make the drainage fairly good.

Allegheny.—Is in good condition as regards ventilation and drainage. It is well attended to.

Standard Nos. 1 and 2.—Has not worked any this year, and was not visited.

Lottie Nos. 1 and 2.—No. 1 has been idle during the year. No. 2 was in good condition on my last two visits.

Stoner Mine.—Has a new opening, and was in good condition on my last visit.

Grace.—Is a small mine with two openings and has not a very large field of coal to work on, but they have more than they have ventilation for, for some time to come.

Berlin.—Two shafts are being sunk at this place which will go down about 500 feet to the B seam.







Cumberland & Summit Coal Co.	Somerset.	Fred. Rowie.	Meversdale.	.....	.....	E. & O. R. R.
Cumberland.	.....	.....	.....	.....	.....	.....
Casselman Coal Co.	Somerset.	F. B. Black.	Meversdale.	.....	.....	E. & O. R. R.
Casselman.	.....	.....	.....	.....	.....	.....
Merrill & Walker.	Somerset.	W. A. Merrell.	Garrett.	.....	.....	E. & O. R. R.
Enterprise.	.....	.....	.....	.....	.....	.....
Rockwood Coal Mining Co.	Somerset.	J. M. Wolfenberger.	Rockwood.	.....	.....	E. & O. R. R.
Rockwood.	.....	.....	.....	.....	.....	.....
Stoner Coal Co.	Somerset.	John O. Stoner.	Berlin.	.....	.....	E. & O. R. R.
Berlin.	.....	.....	.....	.....	.....	.....
H. J. Wilmoth.	Somerset.	H. J. Wilmoth.	Meversdale.	.....	.....	E. & O. R. R.
Wilmoth.	.....	.....	.....	.....	.....	.....
Fairview Coal Co.	Somerset.	Thos. Rees.	Meversdale.	.....	.....	E. & O. R. R.
Fairview.	.....	.....	.....	.....	.....	.....
Pine Hill Coal Co.	Somerset.	I. Good.	Pine Hill.	.....	.....	E. & O. R. R.
Lottie Nos. 1 and 2.	.....	.....	.....	.....	.....	.....
W. D. Althouse & Co.	Somerset.	F. R. Lyon.	Garrett.	.....	.....	E. & O. R. R.
Allegheny.	Somerset.	.....	.....	.....	.....	E. & O. R. R.
Ponfelch.	.....	.....	.....	.....	.....	.....
Ursina Coal Co.	Somerset.	J. F. Huff.	Ursina.	.....	.....	E. & O. R. R.
Rosebud.	.....	.....	.....	.....	.....	.....
Smokeless Coal Co.	Somerset.	Joseph Parker.	Berlin.	.....	.....	E. & O. R. R.
Grace.	.....	.....	.....	.....	.....	.....
'Splash & Read.	Somerset.	Thomas Marshall.	Casselman.	.....	Thos. Marshall.	.....
Read.	.....	.....	.....	.....	.....	.....
Southern Coal Co.	Somerset.	F. H. Darby.	Somerset.	.....	Thos. Marshall.	.....
Williams.	.....	.....	.....	.....	.....	.....
Savage Fire Brick Co.	Bedford.	Uriah Smith.	Hoblitzell.	.....	Casselman.	E. & O. R. R.
Gooseberry.	.....	.....	.....	.....	.....	.....
Cambria Iron and Steel Co.	Fayette.	John N. Patt.	Dunbar.	.....	.....	E. & O. & S. W. B.
Morrell.	.....	.....	.....	.....	.....	.....
Wheeler.	Fayette.	John N. Patt.	Dunbar.	.....	.....	E. & O. & S. W. B.
Wheeler.	.....	.....	.....	.....	.....	.....
Atlas-Mahoning.	Fayette.	John N. Patt.	Dunbar.	.....	.....	S. W. B. of P. R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Washington Coal and Coke Co. Washington No. 1, .....	Fayette, .....	J. S. Newmeyer, .....	Dawson, .....	Geo. Sentemeyer, .....	Washington Run, .....	P., McK. & B. & O.
Washington No. 2, .....	Fayette, .....	J. S. Newmeyer, .....	Dawson, .....	Geo. Sentemeyer, .....	Washington Run, .....	P., McK. & B. & O.
Perry, .....	Fayette, .....	J. S. Newmeyer, .....	Dawson, .....	Geo. Sentemeyer, .....	Washington Run, .....	P., McK. & B. & O.
J. R. Laughrey & Son. Victoria, .....	Fayette, .....	J. S. Laughrey, .....	Washington Run, .....	J. S. Laughrey, .....	Washington Run, .....	P., McK. & Y.
Marietta & Stillwagon. R. & O., .....	Fayette, .....	Clair Stillwagon, .....	Connellsville, .....	Clair Stillwagon, .....	Connellsville, .....	B. & O. R. R.
Dunbar Furnace Co. Ferguson, .....	Fayette, .....	S. G. Valentine, .....	Dunbar, .....	John W. Greaves, .....	Dunbar, .....	S. W. B. of P. R. R. & B. & O.
Furnace, .....	Fayette, .....	S. G. Valentine, .....	Dunbar, .....	John W. Greaves, .....	Dunbar, .....	S. W. B. of P. R. R. & B. & O.
Cumb'd & Elk Lick Coal Co. Shaws Nos. 1 and 2, .....	Somerset, .....	A. C. Rawlins, .....	Meyersdale, .....	A. C. Rawlins, .....	Meyersdale, .....	Baltimore & Ohio.
Viaduct Coal Co. Darlington, .....	Somerset, .....	E. H. Werner, .....	Rockwood, .....	E. H. Werner, .....	Rockwood, .....	Baltimore & Ohio.
Ehlen Brothers. Tub Mill Run, .....	Somerset, .....	Stewart Smith, .....	Elk Lick, .....	Stewart Smith, .....	Elk Lick, .....	Baltimore & Ohio.

TABLE II—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Ninth Bituminous District for the year ending December 31, 1901.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
H. C. Frick Coke Co.														
Leisenring No. 1.	Fayette.	12,835	6,460	3,102	376,206	235,873	500	289	520	3	6	.....	2,850	63
Leisenring No. 3.	Fayette.	.....	11,153	2,319	331,732	235,540	504	305	485	1	1	.....	2,600	67
Trotter.	Fayette.	.....	7,300	3,200	330,366	219,244	464	277	422	2	.....	.....	300	50
Adelaide.	Fayette.	.....	4,242	2,749	292,172	190,121	375	231	337	1	2	.....	150	34
Henry Clay.	Fayette.	.....	3,700	2,903	105,542	60,695	120	290	123	.....	.....	756	.....	13
Coal Brook.	Fayette.	.....	3,737	1,072	102,441	64,404	120	300	124	.....	.....	.....	.....	15
Davidson shaft.	Fayette.	.....	4,828	1,590	318,903	142,049	233	301	341	2	.....	.....	100	30
Total.	.....	118,880	38,755	16,889	1,916,412	1,157,926	2,416	2,043	2,332	8	10	756	6,000	272
W. J. Rainey.														
Paul.	Fayette.	.....	4,974	1,658	297,766	218,351	489	303	431	1	.....	.....	1,000	40
Elm Grove.	Fayette.	.....	3,490	864	148,917	108,422	218	303	200	2	.....	800	500	24
Fort Hill.	Fayette.	.....	4,112	1,728	254,242	186,302	372	302	364	1	.....	75	200	31
Grace.	Fayette.	.....	807	1,249	114,275	95,000	407	287	325	1	.....	800	.....	34
Total.	.....	.....	13,333	5,499	815,200	608,075	1,456	1,195	1,320	5	.....	1,675	1,700	129
Cambria Iron and Steel Co.														
Morrell.	Fayette.	.....	987	577	41,016	30,514	400	311	64	.....	.....	28	250	9
Wheeler.	Fayette.	.....	603	607	46,461	34,237	103	311	63	.....	1	266	90	10
Manoning.	Fayette.	.....	7,171	1,032	77,736	63,638	130	227	152	.....	.....	10	390	18
Atlas.	Fayette.	.....	4,663	496	230,781	178,045	302	291	335	2	.....	21	1,055	48
Total.	.....	.....	13,424	2,712	395,994	296,331	935	1,110	614	2	1	325	1,735	85

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Washington Coal and Coke Co. Washington No. 1, .....	Fayette, .....	357,231	7,898	.....	375,039	192,757	320	305	609	2	.....	4,320	6,000	55
Washington No. 2, .....	Fayette, .....	333,535	7,000	5,097	345,562	81,319	135	299	393	1	.....	3,000	5,200	28
Perry, .....	Fayette, .....	100,171	2,180	1,411	103,762	.....	.....	214	126	.....	1	900	1,000	10
Total, .....	.....	801,257	16,978	6,508	824,753	274,076	455	818	1,128	3	1	8,250	11,550	93
J. R. Laughrey & Son. Victoria, .....	Fayette, .....	150,000	800	1,000	151,800	.....	.....	502	93	.....	1	600	.....	10
Juniata Coke Co. Juniata, .....	Fayette, .....	.....	2,808	958	109,331	145,277	250	310	345	1	1	2,000	400	27
Marietta & Stillwagon. B. & O., .....	Fayette, .....	60,000	730	.....	60,730	.....	.....	365	47	.....	1	.....	.....	4
Laing Sand and Coal Co. Basil, .....	Fayette, .....	5,665	380	4,010	10,065	.....	.....	308	10	.....	.....	.....	.....	1
Dunbar Furnace Co. Ferguson, .....	Fayette, .....	68,329	6,304	3,010	77,652	44,531	220	205	127	.....	1	.....	.....	26
Furnace, .....	Fayette, .....	22,187	.....	174	22,361	237	.....	307	21	.....	.....	130	100	10
Total, .....	.....	90,526	6,304	3,184	100,014	44,768	220	612	148	.....	1	130	100	36
James Cochran Sons & Co. Clarissa, .....	Fayette, .....	94,599	.....	4,722	99,321	65,536	108	301	95	.....	.....	.....	.....	12
Brown & Cochran. Nellie, .....	Fayette, .....	.....	2,500	.....	314,500	210,000	329	303	302	1	1	.....	.....	40



[illegible]



W. A. Merrill & Co.	Somerset, .....	41,319	.....	200	41,519	.....	.....	228	74	2	1	1,000	.....	10
Enterprise No. 1, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
W. D. Althouse & Co.	Somerset, .....	39,814	988	425	41,297	.....	.....	180	86	.....	2	510	50	9
Allegheny, .....	Somerset, .....	31,769	290	116	32,145	.....	.....	187	54	.....	.....	340	.....	5
Pontefract, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, .....	.....	71,613	1,198	541	73,352	.....	.....	367	140	.....	2	850	50	14
Fine Hill Coal Co.	Somerset, .....	69,713	480	300	70,493	.....	.....	191	128	.....	.....	500	.....	12
Lottie No. 1, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smokeless Coal Co.	Somerset, .....	29,906	400	.....	30,306	.....	.....	168	40	.....	.....	140	.....	5
Grace, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stoner Coal Co.	Somerset, .....	15,844	.....	.....	15,844	.....	.....	144	25	.....	.....	74	.....	2
Berlin, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spiah & Read, .....	Somerset, .....	4,563	.....	.....	4,563	.....	.....	109	14	1	.....	48	2,800	2
Southern Coal Co.	Somerset, .....	16,000	.....	480	16,480	.....	.....	206	23	.....	.....	.....	.....	2
Williams, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ursina Coal Mining Co.	Somerset, .....	22,446	.....	440	22,886	.....	.....	191	70	.....	.....	49	176	6
Roschud, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockwood Coal Mining Co.	Somerset, .....	6,656	.....	.....	6,656	.....	.....	200	13	.....	.....	75	50	1
Rockwood, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Viaduct Coal Co.	Somerset, .....	10,920	.....	.....	10,920	.....	.....	210	8	.....	.....	40	.....	1
Darlington, .....	Somerset, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Savage Fire Brick and Coal Co.	Bedford, .....	100	.....	360	460	.....	.....	180	7	.....	.....	26	.....	1
Gooseberry, .....	.....	.....	.....	.....	.....	.....	.....	*222	12,001	41	42	41,531	23,856	1,128
Grand total, .....	.....	5,512,179	148,440	57,294	9,141,543	2,815,541	6,284	.....	.....	.....	.....	.....	.....	.....

\*Average.







TABLE III—Number of each class of employees at each colliery in the Ninth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.		All other employees.	Total outside.
H. C. Frick Coke Co.																		
Leisenring No. 1.	Fayette,	1	4	220	29	13	6	12	210	2	7	8	8	209	4	.....	230	520
Leisenring No. 2.	Fayette,	1	5	226	20	24	5	8	289	1	8	8	1	175	3	.....	196	485
Trotter.	Fayette,	1	4	182	20	20	20	8	240	1	1	5	7	165	3	.....	196	485
Ad-haide.	Fayette,	1	3	155	25	16	2	.....	202	2	5	5	5	121	2	.....	133	337
Henry Clay.	Fayette,	1	1	53	2	7	.....	2	66	1	1	4	.....	49	2	.....	57	123
Coal Brook.	Fayette,	1	1	55	1	6	5	1	70	1	1	1	1	50	1	.....	64	121
Davidson shaft.	Fayette,	1	2	180	9	17	1	10	220	1	4	7	.....	106	3	.....	121	341
Total and average.	.....	7	20	1,071	106	108	24	41	1,377	9	31	40	2	875	18	.....	975	2,352
W. J. Rainey.																		
Paul.	Fayette,	1	3	190	3	24	.....	6	227	2	7	7	.....	177	11	.....	204	431
Elm Grove.	Fayette,	1	1	80	4	10	3	5	104	1	3	3	.....	84	5	.....	96	200
Fort Hill.	Fayette,	1	1	162	3	18	.....	2	187	1	2	6	.....	163	5	.....	177	364
Grace.	Fayette,	1	.....	118	3	15	3	10	150	1	4	5	.....	137	8	.....	175	325
Total and average.	.....	4	5	550	13	67	6	23	668	5	16	21	.....	581	23	.....	652	1,320
Cambria Iron and Steel Co.																		
Morrell.	Fayette,	1	1	33	2	2	.....	2	41	1	2	2	.....	17	1	.....	23	64
Wheeler.	Fayette,	1	.....	31	1	2	.....	3	38	1	1	2	.....	20	1	.....	25	63
Mahoning.	Fayette,	1	1	59	8	7	1	22	69	1	4	4	.....	42	2	.....	53	132
Atlas.	Fayette,	1	2	140	9	26	3	28	208	1	6	3	.....	113	3	.....	126	356
Total and average.	.....	4	4	263	20	37	4	55	387	4	13	11	.....	192	7	.....	227	614

[illegible]

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.						Occupations of Persons Employed Outside.						Grand total inside and outside.				
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.		Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.
Pittsburg Coal Co.																		
Whittiset, .....	Fayette, .....	1	1	140	3	8	4	.....	157	.....	2	3	.....	.....	1	9	15	172
Banning No. 2, .....	Fayette, .....	1	1	35	2	4	2	.....	43	.....	1	7	.....	.....	2	5	6	49
Banning No. 1, .....	Fayette, .....	1	2	250	14	18	2	.....	287	.....	5	1	.....	.....	2	21	35	321
Wick Haven, .....	Fayette, .....	1	1	133	5	16	5	3	185	.....	3	9	.....	.....	1	11	22	207
Darr, .....	Westmoreland, ..	1	1	239	16	20	2	4	304	1	6	9	.....	.....	2	26	44	248
West Newton shaft, ..	Westmoreland, ..	1	1	145	10	19	3	8	187	.....	3	5	.....	.....	2	13	21	211
Ocean No. 3, .....	Allegheny, .....	1	1	18	7	18	3	2	233	.....	3	1	.....	.....	3	16	19	252
Ocean No. 2, .....	Allegheny, .....	1	3	217	10	20	8	2	261	.....	3	1	.....	.....	2	24	31	312
Sarah, .....	Allegheny, .....	1	1	106	5	6	2	2	121	.....	2	1	.....	.....	1	8	10	131
Ocean Nos. 3 and 4, ..	Allegheny, .....	.....	1	110	5	6	5	1	129	.....	1	2	.....	.....	1	14	15	114
Painter & Cornell, .....	Allegheny, .....	1	1	108	6	11	1	1	129	.....	2	2	.....	.....	1	11	16	145
Total and average, .....	.....	10	15	1,825	83	146	33	24	2,136	1	31	34	.....	.....	12	158	236	2,372
Merchants Coal Co.																		
Merchants No. 1, .....	Somerset, .....	1	.....	45	2	5	.....	.....	53	.....	.....	2	.....	.....	.....	5	7	60
Merchants No. 2, .....	Somerset, .....	1	.....	86	1	8	1	4	101	.....	.....	1	.....	.....	1	7	10	111
Merchants No. 3, .....	Somerset, .....	1	.....	32	2	4	1	2	62	.....	.....	1	.....	.....	.....	6	7	63
Total and average, .....	.....	3	.....	183	5	17	2	6	216	.....	.....	5	.....	.....	1	18	24	240
W. K. Niver & Co.																		
Pen Mar, .....	Somerset, .....	1	.....	159	.....	10	5	.....	175	.....	2	4	1	.....	3	15	25	200
Ehlen Brothers.																		
Tub Mill Run, .....	Somerset, .....	1	.....	47	5	6	2	2	63	1	1	.....	.....	.....	1	6	9	72

Chapman, .....	Somerset, .....	1	.....	66	2	10	3	6	88	.....	.....	.....	1	4	5	93
Chapman Coal Co.																
Fair View Coal Co.	Somerset, .....	.....	1	18	.....	2	.....	.....	21	.....	.....	.....	1	2	3	24
Fair View, .....																
Grassy Run Coal Co.	Somerset, .....	1	.....	60	2	8	3	.....	74	1	1	.....	.....	1	2	79
Grassy Run, .....																
G. H. Duncombe.	Somerset, .....	1	.....	79	.....	8	3	3	94	.....	1	1	.....	1	3	100
Hamilton, .....																
Continental & Elk Coal Co.	Somerset, .....	2	.....	219	8	15	3	4	251	.....	4	1	.....	3	37	296
Shaws No. 1, .....	Somerset, .....	1	.....	70	2	6	2	3	84	.....	.....	.....	.....	2	4	88
Shaws No. 2, .....																
Total and average, .....		3	.....	289	10	21	5	7	335	.....	5	1	.....	4	39	384
Stoner Coal Co.																
Berlin, .....	Somerset, .....	1	.....	20	.....	2	.....	.....	23	1	.....	.....	.....	1	2	25
Splash & Read.																
Read, .....	Somerset, .....	1	.....	10	.....	1	.....	1	13	.....	1	.....	.....	.....	1	14
Enterprise Coal Co.																
Williams, .....	Somerset, .....	1	.....	16	.....	2	.....	.....	19	.....	1	.....	.....	1	2	23
Ursina Coal Mining Co.																
Rosebud, .....	Somerset, .....	1	.....	42	2	3	3	2	53	1	2	1	1	2	10	70
Rockwood Coal Mining Co.																
Rockwood, .....	Somerset, .....	1	.....	10	.....	1	.....	.....	12	.....	.....	.....	.....	1	.....	13
Rockwood, .....																
Viaduct Coal Co.																
Darlington, .....	Somerset, .....	1	.....	5	.....	.....	.....	.....	6	.....	.....	.....	.....	2	.....	8
Willmoth, .....																
H. J. Willmoth.	Somerset, .....	1	.....	49	4	4	.....	.....	58	1	1	.....	1	2	6	64
Benjamin Thomas.																
Thomas, .....	Somerset, .....	1	.....	10	.....	1	.....	.....	12	.....	.....	.....	.....	1	1	14
Continental Coal Co.																
Glen McLaren, .....	Somerset, .....	1	.....	100	.....	10	3	4	178	1	2	2	2	2	8	185
Cumberland and Summit Coal Co.																
Cumberland, .....	Somerset, .....	1	.....	166	10	17	5	.....	199	1	3	.....	2	.....	11	216
Casselman Coal Co.																
Casselman, .....	Somerset, .....	2	.....	92	.....	7	1	5	107	.....	2	4	.....	2	6	121

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, book-keepers and clerks.		All other employees.	Total outside.
W. A. Merrill & Co.	Somerset,	1	.....	60	1	6	.....	.....	68	.....	1	.....	.....	.....	2	3	6	74
Enterprise, .....	Somerset,	1	.....	65	.....	6	2	2	76	.....	1	3	1	.....	2	3	10	86
W. D. Althouse & Co.	Somerset,	1	.....	43	.....	4	3	.....	51	.....	1	2	.....	.....	.....	.....	3	54
Allegheny, .....	Somerset,	2	.....	108	.....	10	5	2	127	.....	2	5	1	.....	2	3	13	140
Pontefract, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total and average, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pine Hill Coal Co.	Somerset,	1	.....	110	.....	7	.....	1	119	.....	1	2	.....	.....	1	5	9	128
Lottie No. 1, .....	Somerset,	1	.....	30	.....	3	.....	.....	34	1	.....	1	1	3	.....	.....	6	40
Smokeless Coal and Coke Co.	Somerset,	1	.....	3	.....	1	.....	.....	5	.....	.....	.....	.....	.....	.....	2	2	7
Grace, .....	Bedford,	74	58	6,904	311	690	128	461	8,626	46	167	178	18	2,518	159	369	3,375	12,001
Savage Fire Brick and Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gooseberry, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....





TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
Benjamin Thomas, .....	Somerset.	22	22	21	23	22	23	23	24	22	22	23	23	270
Continental Coal Co., .....	Somerset.	18	18	18	18	18	18	18	18	15	16	18	18	216
Cumberland and Summit Coal Co., .....	Somerset.	25	20	20	21	27	24	24	21	22	26	28	24	278
Casselman Coal Co., .....	Somerset.	.....	.....	.....	.....	31	30	31	31	30	31	30	34	278
W. A. Merrill & Co., .....	Somerset.	23	15	16	16	16	13	15	23	23	24	22	22	238
W. D. Althouse & Co., .....	Somerset.	.....	.....	.....	.....	.....	10.50	10.50	16	19	20.50	16	21	183.50
Five Hill Coal Co., .....	Somerset.	22	18	10	18	2	10	19	15	6	23	21	20	191
Smokeless Coal and Coke Co., .....	Somerset.	18	14	16	1	.....	13	14	14	14	22	17	20	168
Savage Fire Brick and Coal Co., .....	Bedford.	13	11	9	1	15	17	16	22	20	19	20	17	180
Grand total, .....	.....	1,376	1,194	1,206	1,340	1,353	1,367	1,457	1,530	1,423	1,567	1,474	1,502	*222

\*Average.

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Ninth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 14	Steve Borts.	Austrian.	Miner.	27	M.	1		Darr.	Westmoreland.	Instantly killed by a fall of slate.
14	Michael Carrigan.	Irish.	Laborer.	39	S.			Leisenring No. 1.	Fayette.	Fatally injured by being run over by a truck.
Feb. 4	George Jubal.	Slav.	Miner.	22	S.			Atlas.	Fayette.	Instantly killed by fall of coal and slate.
12	Mike Stults.	Slav.	Miner.	22	S.			Fort Hill.	Fayette.	Instantly killed by a fall of roof.
March 12	Joseph Smith.	German.	Miner.	34	M.	1	3	Washington No. 2.	Fayette.	Fatally injured by a fall of coal and slate.
14	Clarence Thompson.	American.	Driver.	19	S.			Ocean No. 2.	Fayette.	Instantly killed by being run over by cars.
April 23	Peter Lestur.	French.	Miner.	54	S.			Paul.	Allegheny.	Instantly killed by fall of roof.
30	Robert Heck.	American.	Miner.	25	M.	1	1	Enterprise No. 1.	Somerset.	Instantly killed by fall of slate.
May 20	Joseph Bowden.	American.	Miner.	32	M.	1	1	Browns No. 2.	Allegheny.	Instantly killed by a fall of slate.
24	Adam Sublska.	Pole.	Miner.	19	S.			Elm Grove.	Fayette.	Instantly killed by fall of roof.
31	Mike Lishco.	Slav.	Miner.	30	M.	1	4	Leisenring No. 3.	Fayette.	Instantly killed by a fall of slate and coal.
June 23	Frank Kesock.	Slav.	Miner.	30	S.			Elm Grove.	Fayette.	Fatally injured by being run over by wagon.
10	John Srengok.	English.	Driver.	22	S.	1	1	Browns No. 2.	Allegheny.	Instantly killed by a fall of slate.
19	Antonio Ferrell.	Italian.	Miner.	25	M.	1	3	Pelle Bridge.	Allegheny.	Instantly killed by a fall of slate.
24	Paul Levo.	Italian.	Miner.	40	S.			Ocean No. 5.	Allegheny.	Instantly killed by a fall of slate.
24	Mike Kovacka.	Slav.	Miner.	24	S.			Trotter.	Fayette.	Instantly killed by a fall of roof.
July 5	Elmer Bogata.	Hungarian.	Miner.	26	M.	1	1	Nellie.	Fayette.	Instantly killed by fall of coal and roof.
9	Andy Taskow.	Slav.	Miner.	49	M.	1	3	Darr.	Westmoreland.	Instantly killed by being caught by a wagon against a rib.
9	Ralph Steelman.	American.	Helper.	15	S.			Davidson shaft.	Fayette.	Instantly killed by a fall of roof.
22	George Carilla.	Slav.	Miner.	42	M.	1	6	Leisenring No. 1.	Fayette.	Instantly killed by a fall of slate.
26	Sander Uppland.	American.	Miner.	35	M.	1	3	Browns No. 2.	Allegheny.	Instantly killed by a blown out shot.
Aug. 14	Joseph Soldinger.	American.	Miner.	13	S.			Sarah.	Allegheny.	Fatally injured by a fall of slate.
20	Alex. Hompland.	American.	Miner.	26	M.	1	1	Painter & Cornell.	Allegheny.	Instantly killed; while carrying a scraper on electric wire.
Sept. 5	John Bolish.	Slav.	Miner.	22	M.	1	2	Darr.	Westmoreland.	Instantly killed; he came in contact with an electric wire.
6	Salvadore Desmone.	Italian.	Miner.	58	M.	1	3	Davidson shaft.	Fayette.	Instantly killed by fall of roof.
10	John Murray.	Irish.	Miner.	49	M.	1	2	Enterprise No. 1.	Somerset.	Instantly killed on tippie by a runaway wagon.
16	Andrew Lozinske.	Austrian.	Miner.	58	M.	1	4	Merchant Coal Co. No. 2.	Somerset.	Instantly killed by fall of coal.

TABLE IV—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct. 1	Cassimer, .....	Italian, .....	Miner, .....	46	M. 1	1	1	Ocean No. 2, .....	Allegheny, .....	Instantly killed by fall of slate.
2	Joe T. Arthur, .....	American, .....	Miner, .....	28	M. 1	1	5	Read, .....	Somerset, .....	Instantly killed by fall of roof.
12	Leah J. Irish, .....	Slav, .....	Miner, .....	38	M. 1	1	1	Rescuing No. 1, .....	Essex, .....	Instantly killed by fall of roof.
14	Andy Faruko, .....	Hungarian, ..	Miner, .....	46	M. 1	1	1	Danville, .....	Westmoreland, ..	Instantly killed by fall of slate.
21	John Earlick, .....	Slav, .....	Miner, .....	36	M. 1	1	1	Adelaide, .....	Fayette, .....	Instantly killed by fall of roof.
21	Andy Olekza, .....	Slav, .....	Miner, .....	37	M. 1	1	1	Washington No. 1, ..	Fayette, .....	Instantly killed by a fall of roof.
26	Steve Popovitcha, .....	Slav, .....	Miner, .....	18	S. ....	....	....	Grace, .....	Fayette, .....	Fatally injured by powder exploding while putting a cartridge in a hole.
Nov. 7	Oliver Claisg, .....	American, ..	Miner, .....	29	S. ....	....	....	Darr, .....	Westmoreland, ..	Instantly killed by a fall of slate.
8	John Voboschek, .....	Slav, .....	Miner, .....	29	M. 1	1	1	Junlata, .....	Fayette, .....	Fatally injured by a fall of roof.
Dec. 12	Charles McCarty, .....	American, ..	Driver, .....	21	S. ....	....	....	Washington No. 1, ..	Fayette, .....	Fatally injured by cars against the rib.
17	Robert Walker, .....	English, .....	Miner, .....	33	S. ....	....	....	Casselman, .....	Somerset, .....	Instantly killed by a fall of slate.
18	Wm. M. Brown, .....	American, ..	Miner, .....	54	S. ....	....	....	Pen Mar, .....	Somerset, .....	Instantly killed by a fall of slate.
26	Ross Trunce, .....	Italian, .....	Miner, .....	21	M. 1	2	2	Banning No. 1, .....	Fayette, .....	Instantly killed by a fall of coal and slate.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Ninth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 5	Albert Tiber.	German.	Miner.	38	M.	Trotter.	Fayette.	Knee cap dislocated by a wagon.
15	Ed. Delany.	Irish.	Miner.	20	S.	Glen Maclaren.	Somerset.	Ankle dislocated by fall of slate.
29	William Phillips.	Slav.	Miner.	53	M.	Leisenring No. 1.	Fayette.	Leg broken by a fall of coal.
23	Charles Shaverburg.	German.	Miner.	38	M.	Leisenring No. 1.	Fayette.	Leg broken by a fall of slate.
23	Adam Nodnosky.	American.	Miner.	38	M.	Banning No. 2.	Allegheny.	Leg broken by a fall of slate.
30	Adam Nodnosky.	Russian.	Miner.	39	M.	Banning No. 2.	Fayette.	Arm broken by a fall of slate.
Feb. 11	Romanski Valance.	Slav.	Miner.	21	S.	Perry Haven.	Fayette.	Arm broken by a fall of slate.
March 13	Steve Smith.	Hungarian.	Miner.	30	S.	Wick Haven.	Fayette.	Arm broken by a fall of slate.
24	Mike Bolig.	Slav.	Laborer.	32	S.	Victoria.	Fayette.	Injured internally by a runaway wagon.
24	John Leggart.	Slav.	Miner.	24	M.	Leisenring No. 1.	Fayette.	Leg broken by a fall of roof.
April 7	Perry M. Wabel.	American.	Miner.	42	M.	Tub Mill Run.	Somerset.	Leg broken by a fall of bone coal.
15	Henry Rojohn.	American.	Driver.	26	M.	Browns No. 2.	Allegheny.	Leg broken by cars.
18	Edward Sandine.	American.	Miner.	38	M.	Forrest Hill.	Fayette.	Severely injured by a fall of slate.
18	William Cameron.	English.	Miner.	36	M.	Allegheny.	Fayette.	Bruised by a fall of roof.
22	John Bell.	English.	Miner.	50	M.	Allegheny.	Fayette.	Leg broken by a fall of slate.
22	Stanley Malinski.	Pole.	Miner.	30	M.	Sarah.	Allegheny.	Leg broken by a fall of slate.
26	John Anvari.	Italian.	Miner.	30	S.	Juniata.	Fayette.	Leg broken by wagons, necessitating amputation.
June 26	William Chishue.	American.	Driver.	17	S.	Cumberland.	Somerset.	Back broken by a fall of slate.
11	Paul Walker.	American.	Tramper.	14	S.	Chapman.	Somerset.	Arm broken by falling from a car.
12	C. P. Heph.	American.	Miner.	45	M.	Chapman.	Somerset.	Injured by a fall of slate.
12	Benjamin Hickman.	English.	Miner.	58	M.	W. Newton shaft.	Westmoreland.	Injured by a fall of slate and coal.
13	Charles McDevayre.	American.	Greaser.	15	S.	Leisenring No. 1.	Fayette.	Injured by falling between wagons.
15	Steve Krankota.	American.	Miner.	38	M.	Sarah.	Allegheny.	Leg broken by a fall of slate.
15	Marvus Martin.	Austrian.	Miner.	74	M.	Gospel.	Allegheny.	Leg cut and otherwise injured by a wagon.
20	John Likon.	Hungarian.	Miner.	35	M.	Wick Haven.	Fayette.	Leg broken by a fall of slate.
20	Metro Behon.	Slav.	Miner.	48	M.	Merchants No. 3.	Somerset.	Injured by a fall of slate.
July 1	John Jupy.	Slav.	Miner.	23	S.	Forrest Hill.	Fayette.	Leg broken by a fall of slate.
6	Martin Eidos.	Slav.	Miner.	35	S.	Leisenring No. 1.	Allegheny.	Leg broken by a fall of slate.
20	George Gierbert.	Slav.	Driver.	23	S.	Banning No. 1.	Fayette.	Hip dislocated by a wagon.
20	Nick Antskawlich.	Pole.	Miner.	30	M.	Pen Mar.	Somerset.	Leg broken by a fall of coal.
26	John Pearce.	American.	Driver.	27	M.	Allegheny.	Somerset.	Leg and ribs broken by a fall of slate.
26	Thomas Mitchell.	American.	Miner.	18	S.	Allegheny.	Somerset.	Leg broken by a fall of slate.



TABLE V.—Continued.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Oct. 30	George Danco, .....	Slav, .....	Driver, .....	22	M.	Leisenring No. 1, .....	Fayette, .....	Leg broken by cars.
Nov. 1	Wesley King, .....	American, ..	Laborer, .....	45	M.	B. & O., .....	Fayette, .....	Hand torn off and collar bone broken by haulage rope.
Nov. 1	Andrew Sarnier, .....	American, ..	Miner, .....	36	M.	Enterprise No. 1, .....	Somerset, .....	Collar bone broken by a fall of coal.
Nov. 4	John Butcher, .....	American, ..	Miner, .....	37	M.	Lonedale, .....	Allegheny, .....	Leg broken by a fall of slate.
Nov. 12	Joseph Korbiski, .....	Pole, .....	Miner, .....	30	M.	Wick Haven, .....	Fayette, .....	Leg broken by a fall of slate.
Nov. 12	George Mistus, .....	Slav, .....	Miner, .....	37	M.	Ferguson, .....	Fayette, .....	Foot injured by a fall of coal.
Nov. 18	Samuel Yes, .....	German, .....	Miner, .....	25	M.	W. Newton shaft, .....	Westmoreland, .....	Back injured by a fall of slate.
Nov. 23	John Oval, .....	Slav, .....	Miner, .....	27	M.	Nellie, .....	Fayette, .....	Leg broken by a fall of coal.
Dec. 13	Sammy Matrusick, .....	Pole, .....	Miner, .....	48	M.	Wheeler, .....	Fayette, .....	Leg broken by a fall of coal.
Dec. 17	Mike Colesset, .....	Hungarian, ..	Cager, .....	22	S.	Leisenring No. 3, .....	Fayette, .....	Arm broken by a wagon.

# Tenth Bituminous District.

CAMBRIA, BLAIR, HUNTINGDON AND BEDFORD COUNTIES.

Altoona, Pa., February 25, 1902.

Hon. Jas. W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of presenting herewith my first annual report for the Tenth Bituminous District, for the year 1901.

The report contains statistical tables and matter relating to mines and mine accidents, with a brief report of the condition of each working as regards ventilation, drainage and improvements; also a table on ventilation, and machines used in mining, and approximate quantity of coal mined by machines.

Eight persons lost their lives in the mines of this district during the year, and twenty-one were injured. There were 5,022,345 tons of coal produced during the year; one fatal accident to 627,793 tons, and 239,159 tons for each non-fatal accident. Six widows and seven orphans were left without support. Three of the fatal accidents occurred under peculiar circumstances. One was from a blast which had been charged with dynamite and black powder. The powder exploded and accomplished the work expected, while the dynamite exploded the following morning, killing John Lowrie. The other fatality occurred with an electric machine; the deceased was setting the jack and the machine became charged with electricity and in an instant he expired.

The third lost his life by the cage descending upon him through the carelessness of some one unknown.

The other five fatal accidents were caused by gross negligence and wilful disobedience of the general and special rules in not spragging coal while undermining it, and propping the roof.

Respectfully submitted,

JOSEPH WILLIAMS,

Inspector.

## Statistical Table.

Number of mines in district, .....	107
Idle during the year, .....	3
Abandoned during the year, .....	2
New mines opened during the year, .....	2

Number of tons of coal produced during the year, ..	5,022,345
Number of tons of coke manufactured, .....	423,642
Number of coke ovens, .....	1,344
Number of persons employed inside, .....	8,098
Number of persons employed outside, .....	1,079
Total number of persons employed, .....	9,177
Number of fatal accidents, .....	8
Number of non-fatal accidents, .....	21
Tons of coal produced per employe, .....	547,276
Number of persons employed per fatal accident, ....	1,147
Number of persons employed per non-fatal accident, ..	437
Number of kegs of powder used, .....	32,670
Number of pounds of dynamite used, .....	22,459
Number of horses and mules, .....	842
Number of cylindrical boilers, .....	60
Number of tubular boilers, .....	85
Total horse power, .....	9,570
Locomotives, steam, .....	5
Locomotives, air, .....	2
Locomotives, electric, .....	32
Engines of all classes, .....	79
Total horse power, .....	5,810
Number of pumps, .....	44
Capacity in gallons per minute, .....	13,280
Number of gallons lifted per minute, .....	6,937
Number of dynamos, .....	18
Number of air compressors, .....	26
Number of electric mining machines, .....	54
Number of compressed air mining machines, .....	134
Number of tons mined by electricity, .....	1,133,429
Number of tons mined by compressed air, .....	1,265,232
Number of fans in the district, .....	50

Table showing kind of opening method of ventilation, size of fan or furnace, capacity in cubic feet of air per minute, volume per minute supplied to each employe, whether machine or pick mine, and type of machine in use.

Name of Mine.	Kind of Opening.	Method of ventilation.	Dimensions of fan or furnace.	Capacity in cubic feet per minute.	Cubic feet per minute supplied to each employe.	Whether pick or machine mine.	Type of Machine.
Pardee No. 3.	Drift.	Fan.	Seven feet.	31,500	217	Machine.	Air puncher.
Pardee No. 4.	Drift.	Fan.	Seven feet.	54,000	690	Machine.	Air puncher.
Pardee No. 5.	Slope.	Fan.	Seven feet.	29,500	680	Machine.	Air puncher.
Pardee No. 6.	Drift.	Fan.	Seven feet.	20,600	383	Machine.	Air puncher.
Pardee No. 7.	Slope.	Fan.	Twelve feet.	39,000	800	Machine.	Air puncher.
Flanagan No. 8.	Drift.	Fan.	Seven feet.	69,000	253	Machine.	Electric chain.
Flanagan No. 9.	Drift.	Fan.	Seven feet.	48,000	960	Pick.	Electric chain.
Columbia No. 12.	Drift.	Furnace.	Six by five feet.	56,000	400	Machine.	Electric chain.
Moshannon No. 13.	Drift.	Furnace.	Six by five feet.	11,000	322	Pick.	Electric chain.
Ashcroft No. 14.	Slope.	Fan.	Five by four feet.	15,000	375	Pick.	Air puncher.
Webster No. 1.	Slope.	Fans.	Twelve feet.	45,000	114	Machine.	Air puncher.
Webster No. 9.	Drift.	Fan.	Eight and a seven foot.	50,000	790	Pick.	Electric chain.
Webster No. 10.	Slope.	Fan.	Seven feet.	37,000	355	Machine.	Electric chain.
Webster No. 11.	Drift.	Fan.	Seven feet.	32,000	369	Machine.	Electric chain.
Webster No. 12.	Slope.	Fan.	Seven feet.	35,000	300	Pick.	Electric chain.
Webster No. 13.	Slope.	Fan.	Seven feet.	15,200	500	Machine.	Air puncher.
Webster No. 14.	Drift.	Fan.	Twelve feet.	25,000	150	Machine.	Electric chain.
Chickadee No. 1.	Drift.	Fan.	Six feet.	17,000	150	Machine.	Electric chain.
Lackawanna No. 2.	Drift.	Fan.	Six feet.	8,000	200	Pick.	Electric chain.
Big Bend.	Drift.	Fan.	Seven feet.	16,000	135	Machine.	Air puncher.
Victor No. 2.	Drift.	Fan.	Seven feet.	25,000	470	Pick.	Air puncher.
Victor No. 3.	Drift.	Furnace.	Six by six feet.	7,000	108	Pick.	Air puncher.
Victor No. 4.	Drift.	Furnace.	Five by ten feet.	10,000	210	Pick.	Air puncher.
Fulton No. 3.	Drift.	Furnace.	Five by ten feet.	11,255	140	Machine.	Air puncher.
Oak Ridge.	Drift.	Furnace.	Six by ten feet.	8,875	225	Pick.	Air puncher.
Greenwich No. 1.	Drift.	Furnace.	Six by five feet.	65,000	155	Pick.	Air puncher.
Alpha.	Drift.	Fan.	Fifteen feet.	8,875	225	Pick.	Air puncher.
Helena.	Drift.	Furnace.	Nine by five feet.	14,800	200	Pick.	Air puncher.
Horse Shoe.	Drift.	Furnace.	Nine by five feet.	14,800	200	Pick.	Air puncher.





Kelley	Natural	Drift	Six by six feet	11,000	Pick
Musquehanna	Furnace	Drift	Six by six feet	22,000	Pick
Durham No. 1	Fan	Slope	Twelve feet	296	Pick
Durham No. 2	Fan	Drift	Twelve feet	500	Pick
Kearney No. 1	Fan	Drift	Twelve feet	30,000	Pick
Fisher	Furnace	Drift	Ten by five feet	30,900	Pick
Bacon	Furnace	Drift	Six by five feet	10,800	Pick
Hickes Nos. 1 and 2	Natural	Drift	Six feet	12,000	Pick
Fulton	Fan	Slope	Four by four feet	13,000	Pick
Warner	Furnace	Drift	Four by four feet	475	Pick
Ivory Hill	Natural	Drift	Four by four feet	222	Pick
Blacks	Natural	Drift	Four by four feet	15,000	Pick
Bennington	Fan	Slope	Seven by five feet	10,000	Pick
Manion	Furnace	Drift	Four by four feet	22,600	Pick
Mattinger	Furnace	Drift	Four by four feet	11,500	Pick
Matt	Furnace	Drift	Eight by six feet	21,800	Pick
Stirling No. 8	Fan	Drift	Twelve feet	25,000	Machine
Belts	Fan	Drift	Six feet	250	Machine
Blubaker No. 13	Furnace	Drift	Six by five feet	16,800	Pick
Dean No. 8	Fan	Slope	Twelve feet	30,500	Machine
Dean No. 9	Fan	Drift	Twelve by six feet	Idle	Machine
Dean No. 10	Furnace	Drift	Twelve feet	45,000	Pick
Woodvale	Fan	Drift	Sixteen feet	43,000	Pick
Robertsdale	Fan	Slope	Sixteen feet	38,000	Pick
Cunard No. 1	Fan	Drift	Twelve feet	20,000	Pick
Cunard No. 2	Furnace	Slope	Six by five feet	8,000	Pick
Crescent No. 1	Fan	Slope	Six by five feet	12,000	Pick
Crescent No. 2	Furnace	Drift	Twelve feet	1,800	Pick
Cambria No. 1	Natural	Drift	Six by four feet	6,300	Pick
Cambria No. 2	Natural	Drift	Twelve feet	8,000	Pick
Chevington No. 1	Natural	Drift	Twelve feet	3,000	Pick
Chevington No. 2	Natural	Drift	Twelve feet	6,542	Pick
Glen White	Fan	Slope	Ten feet	14,400	Pick
Cambria No. 3	Fan	Slope	Ten feet	28,000	Pick
Cambria No. 4	Fan	Slope	Six feet	Idle	Pick
Furitan No. 1	Furnace	Drift	Six by four feet	7,500	Pick
Nant Y Glo No. 1	Fan	Drift	Seven feet	12,000	Pick
Nant Y Glo No. 2	Furnace	Drift	Seven by four feet	4,500	Pick
Black Diamond	Furnace	Drift	Seven by four feet	4,900	Pick
Ocean No. 1	Natural	Drift	Seven by four feet	2,700	Pick
Ocean No. 2	Natural	Drift	Seven by four feet	12,000	Pick
Ocean No. 3	Furnace	Drift	Seven by four feet	12,000	Pick
Richland	Natural	Drift	Six by four feet	8,000	Pick
	Furnace	Drift	Six by four feet	4,000	Pick

Air puncher.

Air puncher.

Air puncher.

Air puncher.

## Description of Mines and Improvements.

**Black Lick Branch.**—Ivory Hill, Black Lick branch, this is a small mine working only five men. The company is now opening a slope into a large territory of coal, and will be able to produce a large output in the near future.

**Webster No. 14.**—This mine is in a fair condition as to ventilation and drainage. The coal is mined by puncher machines.

**Nant-Y-Glo No. 1.**—This mine was not in a good condition as regards ventilation, especially on one side of the mine, but the mine foreman was making every effort to improve its condition, which I have since learned has been done. There is a great mistake made by operators who are continually changing their foreman. The operators, miners, and the mine, invariably suffer from this cause. A rope haulage plant has been installed during the year doing away with the incline, by which the coal was formerly brought near the drift mouth, which is a great improvement in the haulage.

**Big Bend Mine.**—This mine is opened along a limited territory which has caused them to have worked nearly one and a half miles along the crop. The ventilation in cold weather is poor. The fan, which is stationed at the first opening that was made, is too far away from the present workings to have any effect, and upon my last visit I requested that the fan be removed to another opening, which is near the present workings. The drainage is also troublesome, because of the roads being driven along the crop line.

**Vinton Colliery.**—Is worked exclusively on the long wall method, which means taking out all the coal, after leaving pillars to protect the entries, and throwing the roof down behind them, keeping the face of the coal clear with a battery of props. Conveyors are used to bring the coal to the roadway, sufficient bottom being taken up on the roadway to allow the car to be low enough so that the conveyors empty the coal into the car. This system of ventilating is the best, because the current is constantly traveling along the face of the coal. On each visit it was in a good sanitary condition.

**Lackawanna No. 1.** is now becoming so extensive that a larger fan would be a great improvement. The air at the face of the workings was very weak on my last visit. Every effort is being put forth to make a connection between the working faces and an outlet, which is 200 feet above the present outlet. When this is connected, the fan, which is reversible, will produce a larger volume, and the face of the workings can be better ventilated. The drainage is good. Preparations are being made to work this mine on long wall method.

**Lackawanna 2.**—This mine is worked on the long wall method. The ventilation could be improved by moving the fan to another

opening, as it is useless where it is now, but the management informs me that they are going to move it. There is so much difference in the elevation of the two openings, that when the temperature inside and outside of the mine differs, there is a current traveling. But such ventilation cannot be relied upon. The drainage is good.

Lincoln Mine.—On my visit I found the ventilation was very weak—a temporary furnace, which was inadequate. At present, I am informed, a shaft is being sunk, and a new furnace is being constructed, which will put the mine in good condition. The drainage is good.

### Mines Along the Cambria and Clearfield Branch.

Black Diamond.—This mine did not come under the law until the latter part of the year, so I have not yet visited it.

El Mora.—This mine was in a very good condition when I inspected it, both as to ventilation and drainage.

A new seven foot fan has been installed at this mine during the year, which gives ample ventilation.

Nant Y Glo. No. 2.—This mine did not come under the provisions of the law until the latter part of the year, and has not been inspected.

Stirling No. 1.—This mine was in good condition when inspected, both as to ventilation and drainage. A new seven foot fan and compressor has been installed; the latter supplies power for machines in the No. 1 mine and Emma Nos. 3 and 5 mines.

Emma Nos. 3 and 5.—This mine was in a fair condition when inspected. Ventilation and drainage were very fair.

Blubaker No. 13.—Ventilation was not as good at the face of the workings as it should have been. The furnace is too small for the mine. They were forcing one of the heading to get out the other side of the hill, not turning any rooms, the intention being to mine the coal by machines, and to get the power from Stirling No. 1, through the heading when it will be driven out. The drainage was fair.

Gussie Mine.—Was in a good condition both as to ventilation and drainage. An air compressor has been built and the coal is now mined by machines.

Susquehanna Mine.—Was in a fair condition when inspected.

Allport No. 2 has changed owners during the year, and is now owned by R. Peale. It is known as Victor No. 2. It was worked but little during the year, but was in very fair condition when inspected, both ventilation and drainage being good.

Carrolltown Mines, on the Beach Creek Railroad, Eclipse Mine.—Is in a very faulty territory, the sand rock pinching the coal nearly all out. The management still continues to penetrate into the hill, believing that they will eventually be rewarded by securing the vein

in its proper thickness. I found the ventilation fair for the number of men employed. The drainage was good.

**Maucher Mine.**—Is in very fair condition as regards ventilation and drainage. The roof, over part of the workings is very bad, necessitating great care in timbering. Being full of loose joints, the cover is shallow.

Brawley or as now named, Victor No. 3, was in a good condition.

Snyder, now named Victor No. 4, is a new opening, and the operator was at the time of my inspection preparing to place a new furnace in it. They are forcing a heading to connect this mine with Victor No. 3.

**Patton Mine.**—Is the last in the group near Carrolltown. It is a small mine, ventilated by furnace, and I found a fair quantity of air for the number of men employed, but I do not approve the system of ventilation, although I found it was difficult to conduct it otherwise. The air is carried through the rooms, on the inlet side for a short distance, necessitating canvas sheets on each room. The leakage was so great that the air near the face was very weak. But, I found that the foreman was making preparations for the inside workings, to do away with this system and conduct air through the rooms by check canvas on the heading, using one heading for a return airway. The drainage was fair.

**Spangler Mine.**—Is about exhausted. Its solid coal (unless they can buy more land which lies adjacent to this mine) has nearly all been taken out. The ventilation is poor at the extreme end of the workings, the furnace being inadequate for the work required of it, and should more coal be taken out through the mine, they will be compelled to get better ventilating apparatus. The drainage was very fair.

**West Branch Mine.**—is the only mine in the district that generates explosive gases. It is ventilated by a Capell fan producing 50,000 cubic feet at a pressure of three and one-half inches water gauge.

The ventilation is well conducted to the face of the workings, as no pillars have as yet been drawn in the mine as they are awaiting an outlet for drainage, and the excavation is being rapidly developed. There are two fire bosses employed, and the mine is being generally well cared for.

#### Walnut Run Mines.

Alpha is a small mine fairly well ventilated, but the drainage could be considerably improved.

Juniata.—This mine has been idle during the year, except that a little work was done in December.



Delta Mine.—A seven foot fan was installed during the year, replacing the furnace which had become inadequate, but since the fan has been working, I have found it in a good sanitary condition. The only requirements that I noticed was the necessity of splitting the current, which I found the foreman was preparing to do.

Allport No. 1.—This mine was upon each visit in good condition. There are two seams being worked with an incline plane from the lower to the upper one, barneys being attached to the ropes; its general condition is very good.

Walnut Run No. 1.—This is a small mine and nearly exhausted, but preparation is being made to open in the upper seam. It was in a good condition as regards ventilation, but the drainage could be improved.

Cymbria Nos. 1 and 2, are opened in two seams of coal above each other. No. 1 is ventilated by a seven foot Stine fan, and was in a fair condition. The drainage was good. No. 2 is in the upper seam, and is not extensively developed. It is ventilated by a furnace and was in a very fair condition, but the drainage was not so good.

Manion Mine.—I found to be opened on modern principles. Ventilation and drainage were also good.

Lancashire No. 7 has become an extensive operation, and the furnace used to produce the ventilation is inadequate to supply the minimum quantity prescribed by law, viz: 100 cubic feet per minute for each employe. This would not be sufficient to keep the mine in a healthful condition, which I believe is the best way, so as to have sufficient velocity to carry away the large quantity of powder smoke produced. Upon my last inspection I notified the management of the necessity for a change in the condition of the ventilation, to which they replied that every effort would be made to have the mine in compliance with the Bituminous mining law.

Lancashire Nos. 6 and 8.—Are connected and ventilated by a 16-foot Brazil fan, which has been installed during the year, doing away with the furnace which was not sufficient to ventilate these mines. Upon my last visit I found them in a good condition both as to ventilation and drainage.

Empire Mine.—Is on the Beech Creek road, and was in a fair condition as to ventilation and drainage.

Lancashire No. 3.—This mine was upon my last inspection in a very fair condition as to ventilation and drainage. Powder was found stored at the tipple, which is prohibited by law, but which at my request has since been removed.

Walnut No. 2.—Only worked during December.

#### On the Beech Creek Railroad.

Pardee Nos. 2 and 3, are connected and are ventilated by a fan. On my visit to No. 2 I found it in a good condition, but No. 3 being



extensive and the coal nearly exhausted at the far end, the ventilation was very defective. The drainage was not very good.

Columbia No. 12.—This mine is extensive and was on my last inspection in a very fair condition both as to drainage and ventilation.

Pardee No. 5.—This mine has not been opened long and encountered considerable trouble from rock rolls, completely cutting the coal out. The plant is well equipped with machinery, and the inside workings are in a good condition.

Ashcroft Mine.—Is one that is now experiencing the effects of contracting it out for cheap coal. The air courses are in very bad condition, the seam being but three and one-half feet high. Sediment was allowed to gather in the low places until it is with difficulty that air can be gotten to the face of the workings. On my inspection I notified the foreman that he must improve the condition of ventilation. The drainage was good.

Moshannon Mine.—Was in good condition on both my visits.

Flanagan No. 8.—This is an extensive mine, and while I measured 67,000 cubic feet at the fan, I found that an extensive part of the workings were deficient of air. The operators intend to put a shaft down in this part, which will put the mine in a good condition as regards ventilation, enabling the air to be divided into splits, which is badly needed. The drainage was good.

Flanagan No. 9.—This mine is connected with No. 8 and being the intake for No. 8 mine was in good condition.

Pardee No. 6.—This mine was, on my last inspection, in a good condition both as regards drainage and ventilation.

Pardee Nos. 4 and 7.—These mines are connected, No. 4 working the upper seam, while No. 7 is a slope opening into the lower seam. Both were found in very good condition. Every detail was being carefully looked after by the foreman in charge.

Stirling No. 10.—This mine was idle until October, when it was let by contract, and is now worked by twelve men. It was in fair condition as to ventilation and drainage.

Puritan No. 4 is a small mine. The coal is reached by a short slope, all coal having been mined above water level by a drift. There are about twenty-two men employed and on my inspection it was in a poor condition as regards ventilation. The furnace was not being used, neither was it in a condition for use. I informed the superintendent of the conditions, and he promptly attended to the matter. The drainage was fair.

Stirling No. 8.—This is an extensive mine and considerable improvement has been made to it during the year. 12-foot Stine fan has replaced the 7-foot fan, and about one mile of brick stopping has been put up along the main road separating the intake and return, which has sent a fair volume of air to the face of the workings.

Rich Hill Mine.—Has been newly opened, and is in a fair condition.

Oak Ridge.—The old part of this mine is nearly exhausted, and they are now going to the dip, and putting in a rope haulage system. A compressor has been installed during the year. The mine was in good condition, both ventilation and drainage being very fair.

Webster No. 12 is a slope working the "C" vein, which is about three and one-half feet high. The ventilation was defective at the face of the workings, which was caused by poor stoppings between the intake and return. Drainage was also poor.

Webster No. 13.—This mine is working the upper vein, and is extensive. The ventilation was poor at the face of the workings, although a large volume was measured at the fan, and an effort is being made to reach a point in the hill that will enable them to make an outlet. The drainage was fair.

#### Mines on the Clearfield and Cresson Branch.

Webster No. 7.—This mine is in fair condition, except at the face of the valley headings, where the ventilation was weak. The company is about to make some important changes, which will improve its condition. Drainage is good.

Richland Mine was idle the latter part of the year and was not inspected.

Dean No. 10.—This is a new mine and is in a very good condition. Ventilation and drainage is good.

Dean No. 9 was idle during the latter part of the year.

Dean No. 8.—This mine works the lowest vein of coal in the district that is being worked by machines. It is but three feet high, and it is surprising how economically it is worked. It is a slope on a grade of about four per cent., makes considerable water, and has a long distance to pump. The mine is well cared for, but they will be compelled to make a new opening in the near future. Ventilation and drainage are very fair.

Van Orma Nos. 1 and 2.—No. 1 is opened in the lower seam. No. 2 is opened in the upper seam. They are connected, and each ventilated by a furnace. It is a small operation, and was in fair condition.

Beaver Dam mine has been practically idle since February.

Flinton mine is a small one; and has been doing but very little, not coming under the law since early in the year.

#### Mines Adjacent to the Pennsylvania Railroad.

Webster No. 9 is a shaft located at Cresson. On my last visit the ventilation had been considerably improved from my former visit,

but in some of the face workings it was still deficient. Drainage was very fair.

Gallitzin shaft, located at Gallitzin, was on my first visit very deficient in ventilation at the face of the workings. On my last visit it had been considerably improved, although the quantity measured at the fan was much less than the former measurement. It was being well conducted to the face of the workings. The drainage was very fair.

Webster No. 10, located at Gallitzin, is a slope with very extensive area. Some parts of the workings were in a good condition, while others were not as regards ventilation. The fan is too small for so extensive a working. I measured 63,000 cubic feet while 100,000 is little enough for so large a working. The drainage was good.

Webster No. 11 is located at the east end of the Tunnel Hill in Blair county. It was in a very fair condition, both as to drainage and ventilation.

Bennington mine is located at the east end of the Tunnel, and was in a fair condition as regards ventilation. Drainage was not very good. The timber in the slope road was decaying and becoming dangerous, which was caused by the steam line which operated the pumps. The operation has changed ownership and the timbers are being replaced by new ones.

Bradley No. 1 is a small mine located at Bennington. It was in a fair condition.

Bradley Nos. 2 and 3 are also small operations. There were in fair condition. Ventilation and drainage were fair.

Glen White mine located at Kittanning Point, was in fair condition; ventilation and drainage were fair.

Horse Shoe Mine.—Is a small one working low coal. It was in fair condition; drainage and ventilation were fair.

Delaney No. 5.—This mine was in a very good condition, all details being carefully looked after. Ventilation and drainage are very good.

Delaney No. 4 is a small mine, and was in fair condition.

#### Mines in Bedford County.

Chevington Nos. 1 is a small mine and there has been a great deal of trouble before reaching workable coal. It was in fair condition.

Crescent No. 1 is connected with another old mine through which part of the coal is taken. It was in very fair condition. Its present output is confined to pillar work, and it will soon be exhausted.

Cambria No. 1 is connected with the Crescent mine, and was in fair condition as regards ventilation and drainage.

Chevington No. 2 is a small mine, working nine men. It was in fair condition.

Kearney.—There is a slope and drift at this place which are connected. Owing to labor troubles this mine was idle all summer. It is connected with other mines, Crescent No. 1 and Carbon. The strength of the cover over it is marvelous, as old mines are still standing for miles, allowing large currents of air to travel through them, the difference in elevation being 200 feet and more, between openings, that the least difference in the temperature between the inside and outside of the mine causes a current to flow. I measured in the mine 30,000 cubic feet. This strong cover also allows the workings to be driven in a reckless manner, there being no system whatever followed, rooms being turned off rooms, in the mine.

Cambria Nos. 2 and 3.—Cambria No. 2 was idle throughout the year. Cambria No. 3, located at Langdondale, is a shaft working. Ventilation and drainage were very fair. The manway out of this mine was not in good condition, but preparations were being made to remedy it.

### Mines on Six Mile Run.

Durham No. 1 is almost exhausted. It was in good condition. ,

Durham No. 2 did not work until the last of the year, and was not inspected.

Boom Mine.—This mine has been idle and is filled with water.

Cunard Nos. 1 and 2.—No. 1 is a shaft and there is great difficulty from rolls and anticlinals. It is in very fair condition, both as to drainage and ventilation. No. 2 is a small slope mine. It was in good condition.

Crescent No. 2.—The furnace in this mine was found inadequate to properly ventilate the mine, the main airway being small. They have now enlarged the airway which will improve its condition until a fan can be installed.

Bacon.—This is a new mine and is in a good condition.

Gates Mine.—A new fan was installed during the latter part of the year, and the mine being small it is now well ventilated. Drainage is fair.

Crescent No. 3.—This mine was in poor condition, low coal and no artificial means of ventilation. They are now sinking a shaft to install a furnace, which will put it in a good condition, as regards ventilation. Drainage is fair.

Warner.—This mine is small, with considerable difference in the elevation of the outlet and inlet. It was in fair condition, as to drainage and ventilation.



## Mines in Huntingdon County.

Hicks Nos. 1 and 2.—No. 1 was in fair condition, working coal on the left side of a steep anticlinal. No. 2 mine is working the coal on the right side, with a pitch of about forty degrees. There were only ten men employed when it was inspected and it was in fair condition for such a small number of men.

Melrose.—At this time there is trouble with a large synclinal, which enlarged as the openings penetrated the hill, causing them to diverge from each other. The synclinal being between the two openings, and as they were driven quite a distance before any connection could be made, the ventilation was very poor, although a furnace was provided for each opening, but now that connection has been made, the mine is in very fair condition. Drainage is fair.

Ocean No. 1 was in fair condition as regards drainage and ventilation, but rock rolls, anticlinals, etc., left but very little coal, so that only a few men could work during the latter part of the year.

Ocean No. 3 is composed of three openings driven a short distance into the hill, working twenty men, and was in good condition.

Ocean No. 2 is an old mine.—The ventilation in one part was very poor, but efforts were being made to drive through to another mine, which would put that part of the mine in a good condition. Drainage was fair.

Fisher Mine.—Is also an old mine. The ventilation was very fair. Drainage was not good.

Carbon.—This mine was in fair condition, both as to drainage and ventilation.

Black mine is a small one which was opened on the single entry system, carrying a gob aircourse which came to an end, as no air could be brought to the face of the workings. On my last visit, a shaft had been put down near the face, and the ventilation was good. Drainage was fair.

## Mines on the East Broad Top Railroad.

Robertsdale Slope and Shaft.—These mines are connected, and were in fair condition as regards ventilation and drainage. A fire was discovered by the foreman on October 5, in the upper seam in some of the old workings. A strike of ten weeks had occurred during the summer, during which time part of the mine was flooded shutting the air off other parts of the mine. After the water was taken out and the air circulated, the heat generated by the wet sulphur, came into action, causing the gob, coal and slate to take fire. Strenuous efforts were made in trying to extinguish it, which did not meet with success, when it was bratticed off with double boards, with clay tamped between them,



A water gauge and thermometer reading was taken each day. The latter was inserted through a pipe several feet long so that the readings both inside and outside the brattice were taken, which recorded sixty degrees outside and ninety degrees inside the brattice. Two men were detailed to keep watch on the slope side at night, and two on the shaft side. By day there was one man on each side to look after it. No pressure was indicated by the water gauge and large quantities of blank damp were given off and carried away with the return air on each side of the enclosure. The same conditions exist at this time, it being now more than four months since it was first discovered. It is now thought that there cannot be any fire burning, but the heat is still retained and it may last a long time. The peculiar conditions surrounding the fire are caused by the reckless manner in which coal had been mined, leaving no substantial pillars to enable masonry to be put around the fire for the purpose of smothering or drowning it out. The height of the two coals with its rock between them, also the elevation at which the fire is, would require an enormous quantity of water to extinguish it by drowning.

TABLE I—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Tenth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Webster Coal and Coke Co.						
Webster No. 1.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Webster No. 2.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Webster No. 3.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Webster No. 11.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Webster No. 12.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Webster No. 13.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Webster No. 14.	Cambria.	J. H. Tonkin.	Gallitzin.	W. C. Shaffer.	Gallitzin.	Pennsylvania Railroad.
Rockhill Iron and Coal Co.						
Robertsdale slope.	Huntingdon.	L. L. Logan.	Robertsdale.	L. L. Logan.	Robertsdale.	E. B. T. R. R.
Woodvale shaft.	Huntingdon.	L. L. Logan.	Robertsdale.	L. L. Logan.	Robertsdale.	E. B. T. R. R.
Duncan & Spangler.						
Blubaker No. 8.	Cambria.	C. W. Stewart.	Hastings.			Pennsylvania Railroad.
Blubaker No. 13.	Cambria.	C. W. Stewart.	Hastings.			Pennsylvania Railroad.
Blubaker No. 11.	Cambria.	C. W. Stewart.	Hastings.			Pennsylvania Railroad.
Delta.	Cambria.	C. W. Stewart.	Hastings.			Pennsylvania Railroad.
Madeira Hill C. M. Co.						
Mannion.	Cambria.	F. G. Betts.	Clearfield.	Thos. Ester.	Barnesboro.	Pennsylvania Railroad.
Spangler.	Cambria.	F. G. Betts.	Clearfield.	Geo. McCornick.	Spangler.	Pennsylvania Railroad.
E. Eichelberger & Co.						
Fisher.	Huntingdon.	E. Eichelberger.	Saxton.			H. and B. T. R. R.
Bacon.	Bedford.	E. Eichelberger.	Saxton.			H. and B. T. R. R.
Beech Creek Coal & Coke Co.						
Pardee No. 3.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Pardee No. 4.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Pardee No. 5.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Pardee No. 8.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Pardee No. 6.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Pardee No. 9.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Pardee No. 13.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Moshannon No. 13.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Ashecroft No. 14.	Cambria.	W. C. Lingle.	Patton.	W. C. Lingle.	Patton.	New York Central R. R.
Taylor & McCoy C. & C. Co.						
Gallitzin shaft.	Cambria.	T. E. Dipner.	Gallitzin.			Pennsylvania Railroad.

Crescent and Clearfield Coal Richland,.....	Cambria,.....	P. H. Walls,.....	Philadelphia,.....	F. P. McFarland,.....	Frugality,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Dean No. 8,.....	Cambria,.....	P. H. Walls,.....	Philadelphia,.....	F. P. McFarland,.....	Frugality,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Dean No. 9,.....	Cambria,.....	P. H. Walls,.....	Philadelphia,.....	F. P. McFarland,.....	Frugality,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Dean No. 10,.....	Cambria,.....	P. H. Walls,.....	Philadelphia,.....	F. P. McFarland,.....	Frugality,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Deringer Bros. Susquehanna,.....	Cambria,.....	W. Deringer,.....	Spangler,.....	W. Deringer,.....	Spangler,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Empire Coal Mining Co. Empire,.....	Cambria,.....	R. A. Shillingford,.....	Clearfield,.....	Wm. Crichton,.....	Barnesboro,.....	New York Central R. R. New York Central R. R. New York Central R. R. New York Central R. R.
Eclipse,.....	Cambria,.....	R. A. Shillingford,.....	Clearfield,.....	W. R. Leachbatter,.....	Spangler,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Elmora Coal Mining Co. Elmora,.....	Cambria,.....	J. B. Reed,.....	Elmora,.....	Elmora,.....	.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Elmora Coal Mining Co. Elmora,.....	Cambria,.....	J. B. Reed,.....	Elmora,.....	Elmora,.....	.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Sterling Coal Co. No. 1,.....	Cambria,.....	J. B. Reed,.....	Elmora,.....	Elmora,.....	.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Sterling Coal Co. Nos. 3 and 5,.....	Cambria,.....	J. B. Reed,.....	Elmora,.....	Elmora,.....	.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Barnes & Tucker, Lancashire No. 3,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Lancashire No. 4,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Lancashire No. 6,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Lancashire No. 7,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Lancashire No. 8,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Lancashire No. 9,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Junata,.....	Cambria,.....	J. T. Slinger,.....	Barnesboro,.....	John Reed,.....	Barnesboro,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Crescent Coal Mining Co. Crescent No. 1,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
Crescent No. 2,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
Crescent No. 3,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
Crescent No. 4,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
John Langdon, Cambria No. 1,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
Chevington No. 1,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
Chevington No. 2,.....	Bedford,.....	John Langdon,.....	Hopewell,.....	.....	.....	H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R. H. & B. T. M. R. R.
Lackawanna Coal & Coke Co. Lackawanna No. 1,.....	Cambria,.....	C. R. Claghorn,.....	Wehrum,.....	W. P. Morgan,.....	Vintondale,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
Lackawanna No. 2,.....	Cambria,.....	C. R. Claghorn,.....	Wehrum,.....	W. P. Morgan,.....	Vintondale,.....	Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad, Pennsylvania Railroad.
W. H. Sweet, Ocean No. 1,.....	Huntingdon,.....	W. H. Sweet,.....	Dudley,.....	.....	.....	H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R.
Ocean No. 2,.....	Huntingdon,.....	W. H. Sweet,.....	Dudley,.....	.....	.....	H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R.
Ocean No. 3,.....	Huntingdon,.....	W. H. Sweet,.....	Dudley,.....	.....	.....	H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R.
Carbon,.....	Huntingdon,.....	W. H. Sweet,.....	Dudley,.....	.....	.....	H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R.
Huntingdon No. 2,.....	Huntingdon,.....	W. H. Sweet,.....	Dudley,.....	.....	.....	H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R. H. & B. T. R. R.
Clear. Bit. Coal Corporation. West Branch,.....	Cambria,.....	R. A. Shillingford,.....	Clearfield,.....	Timothy McCarthy,.....	Barnesboro,.....	New York Central R. R. New York Central R. R. New York Central R. R. New York Central R. R.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Black Lick Mining Co. Big Bend, .....	Cambria, .....	.....	.....	A. J. McHugh, ....	Exedit, .....	Pennsylvania Railroad.
Colonial Iron Co. Durham No. 1, .....	Bedford, .....	Wm. Lander, .....	Riddlesburg, .....	J. C. Allan, .....	Riddlesburg, .....	H. B. T. R. R.
Durham No. 2, .....	Bedford, .....	Wm. Lander, .....	Riddlesburg, .....	J. C. Allan, .....	Riddlesburg, .....	H. B. T. R. R.
Vinton Colliery Co. Vinton, .....	Cambria, .....	R. G. Ware, .....	Vintondale, .....	R. G. Ware, .....	Vintondale, .....	Pennsylvania Railroad.
E. R. Jackman & Co. Maucher, .....	Cambria, .....	E. R. Jackman, .....	Carrolltown, .....	R. C. Morris, .....	Carrolltown, .....	New York Central R. R.
Rich Hill Coal Co. Rich Hill, .....	Cambria, .....	E. W. Samuel, .....	Mt. Carmel, .....	H. M. McAlarney, ..	Hastings, .....	Pennsylvania Railroad.
Gates Bros. Fulton Mine, .....	Bedford, .....	M. F. Gates, .....	Philadelphia, .....	M. F. Gates, .....	.....	H. B. T. R. R.
Kearney, .....	Bedford, .....	J. E. Thropp, Jr., ..	Earlston, .....	T. A. Jones, .....	Kearney, .....	H. B. T. R. R.
A. G. Hickes. Hickes No. 1, .....	Huntingdon, ..	A. G. Hickes, .....	Coalmont, .....	J. E. Roberts, .....	Coalmont, .....	H. B. T. R. R.
Hickes No. 2, .....	Huntingdon, ..	A. G. Hickes, .....	Coalmont, .....	J. E. Roberts, .....	Coalmont, .....	H. B. T. R. R.
Spangler C. & C. M. Co. Gussie, .....	Cambria, .....	James A. McClain, ..	Spangler, .....	Rush McFadden, ..	Latrobe, .....	Pennsylvania Railroad.
Greenwich Coal and Coke Co. Greenwich No. 1, .....	Cambria, .....	.....	.....	.....	.....	Pennsylvania Railroad.
Oak Ridge Coal and Coke Co. Oak Ridge, .....	Cambria, .....	H. J. Van Dusen, ...	Hastings, .....	.....	.....	Pennsylvania Railroad.
Knight & Co. Alpha No. 1, .....	Cambria, .....	H. C. Williams, ....	Barneshoro, .....	.....	.....	Pennsylvania Railroad.
J. J. McGonigal. Patton No. 2, .....	Cambria, .....	J. J. McGonigal, ....	Carrolltown, .....	.....	.....	New York Central R. R.

John Harvey & Co. Sterling No. 10.	Cambria, .....	John Harvey, .....	Hastings, .....	.....	.....	Pennsylvania Railroad.
Altoona Coal & Coke Co. Delancy, .....	Cambria, .....	John Layed, .....	Altoona, .....	.....	J. L. Munro, .....	Pennsylvania Railroad.
Horse Shoe, .....	Blair, .....	John Layed, .....	Altoona, .....	.....	J. L. Munro, .....	Pennsylvania Railroad.
Bradley & Meagher. Bradley No. 1, .....	Blair, .....	F. H. Bradley, .....	Gallitzin, .....	.....	F. H. Bradley, .....	Pennsylvania Railroad.
Bradley No. 2, .....	Blair, .....	F. H. Bradley, .....	Gallitzin, .....	.....	F. H. Bradley, .....	Pennsylvania Railroad.
Bradley No. 3, .....	Blair, .....	F. H. Bradley, .....	Gallitzin, .....	.....	F. H. Bradley, .....	Pennsylvania Railroad.
Benbrant Peale. Victor No. 1, .....	Cambria, .....	Alex. B. Dunsmore, .....	Glen Ritchey, .....	.....	A. M. Dunsmore, .....	New York Central R. R.
Victor No. 2, .....	Cambria, .....	Alex. B. Dunsmore, .....	Glen Ritchey, .....	.....	A. M. Dunsmore, .....	New York Central R. R.
Victor No. 3, .....	Cambria, .....	Alex. B. Dunsmore, .....	Glen Ritchey, .....	.....	A. M. Dunsmore, .....	New York Central R. R.
Victor No. 4, .....	Cambria, .....	Alex. B. Dunsmore, .....	Glen Ritchey, .....	.....	A. M. Dunsmore, .....	New York Central R. R.
Glen White C. & L. Co. Glen White, .....	Blair, .....	Val Eichenlaub, .....	Glen White, .....	.....	.....	Pennsylvania Railroad.
Altoport Coal Co. No. 1, .....	Cambria, .....	J. H. Altoport, .....	Hastings, .....	.....	.....	Pennsylvania Railroad.
Altoport Coal Co. No. 2, .....	Cambria, .....	J. H. Altoport, .....	Hastings, .....	.....	.....	Pennsylvania Railroad.
The Walnut Run Coal Co. Walnut Run No. 1, .....	Cambria, .....	C. F. Fraser, .....	Altoona, .....	.....	Peter Stewart, .....	Pennsylvania Railroad.
Walnut Run No. 2, .....	Cambria, .....	C. F. Fraser, .....	Altoona, .....	.....	William Wood, .....	Pennsylvania Railroad.
Lincoln Coal Co. Lincoln, .....	Cambria, .....	C. F. Fraser, .....	Altoona, .....	.....	T. H. Booth, .....	Pennsylvania Railroad.
Puritan Coal Mining Co. Puritan No. 4, .....	Cambria, .....	G. E. Scott, .....	Philadelphia, .....	.....	Jas. Mc—, .....	Pennsylvania Railroad.
The Morrisdale Coal Co. Cunard shaft, .....	Bedford, .....	F. H. Wigton, .....	Philadelphia, .....	.....	R. H. Kay, .....	H. & B. T. R. R.
Cunard slope, .....	Bedford, .....	F. H. Wigton, .....	Philadelphia, .....	.....	R. H. Kay, .....	H. & B. T. R. R.
Blacks, .....	Huntingdon, .....	A. J. Black, .....	Broad Top City, .....	.....	Isaac Cook, .....	H. & B. T. R. R.
J. W. Dunwiddle. Nant Y Glo No. 1, .....	Cambria, .....	J. W. Dunwiddle, .....	Phillipsburg, .....	.....	.....	Pennsylvania Railroad.
Nant Y Glo No. 2, .....	Cambria, .....	J. W. Dunwiddle, .....	Phillipsburg, .....	.....	.....	Pennsylvania Railroad.
Bennington Coal & Coke Co. Bennington, .....	Blair, .....	R. H. Spendley, .....	Altoona, .....	.....	Henry Newhart, .....	Pennsylvania Railroad.
S. V. Davis & Co. Flinton, .....	Cambria, .....	S. V. Davis, .....	Beccaria, .....	.....	S. V. Davis, .....	Pennsylvania Railroad.
Barker & Madill. Ivory Hill, .....	Cambria, .....	John Madill, .....	Nant Y Glo, .....	.....	John Madill, .....	Pennsylvania Railroad.
Lambirth Coal Co. Warner, .....	Bedford, .....	C. Wilson, .....	Betz Bldg., Phila., .....	.....	G. McIntyre, .....	H. & B. T. R. R.



TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
The Great Eastern Seaboard Co.						
Cambria No. 2.	Bedford.	Jas. Denithorn.	Huntingdon.	John Morris.	Langdonale.	H. & B. T. R. R.
Cambria No. 3.	Bedford.	Jas. Denithorn.	Huntingdon.	John Morris.	Langdonale.	H. & B. T. R. R.
Dougherty Coal Co.						
Dougherty No. 2.	Cambria.			J. H. Daugherty.	Altoona.	P. J. E. & E. R. R.
Kelly & Flanagan.						
Kelly No. 1.	Cambria.			C. H. Kelly.	Altoona.	P. J. E. & E. R. R.
Jackson & Walker.						
Black Diamond.	Cambria.	A. C. Jackson.	Carrolltown.			Pennsylvania Railroad.
Cymbria Coal Co.						
Cymbria.	Cambria.	D. E. Williams.	Philadelphia.	E. R. Musser.	Barnesboro.	Pennsylvania Railroad.
Saxton Furnace Co.						
Melrose.	Huntingdon.	Wm. Lander.	Riddlesburg.	Thos. Wilson.	Coalmont.	H. & B. T. R. R.







TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.		Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.		Total production of coal in tons.		Total production of coke in tons.		Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Allport Coal Co.																		
Allport No. 1, .....	Cambria, .....	105,490	500	100	106,090	118	206	118	.....	.....	.....	.....	.....	.....	.....	1,000	1-0	18
Allport No. 2, .....	Cambria, .....	15,339	.....	.....	15,339	69	76	69	.....	.....	.....	76	69	.....	.....	150	.....	6
Total, .....	.....	120,829	500	100	121,429	178	141	178	.....	.....	.....	141	178	.....	.....	1,150	100	24
Rembrandt Peale.																		
Victor No. 1, .....	Cambria, .....	479,677	95	142	482,047	96	166	96	.....	.....	.....	166	96	.....	.....	513	100	5
Victor No. 2, .....	Cambria, .....	3,300.2	.....	.....	3,300.2	14	12734	14	.....	.....	.....	.....	.....	.....	.....	53	50	1
Victor No. 4, .....	Cambria, .....	3,861	.....	60	3,921	40	2344	40	.....	.....	.....	.....	40	.....	.....	30	.....	6
Total, .....	.....	55,118.2	95	202	55,415.2	150	116	150	.....	.....	.....	116	150	.....	.....	506	150	12
Stirling Coal Co.																		
Emma Nos. 3 and 5, .....	Cambria, .....	70,600	100	.....	70,600	115	266	115	.....	.....	.....	266	115	.....	.....	400	.....	7
Stirling No. 1, .....	Cambria, .....	28,000	.....	150	28,150	93	124	93	.....	.....	.....	124	93	.....	.....	200	.....	6
Total, .....	.....	98,000	160	150	98,250	208	185	208	.....	.....	.....	185	208	.....	.....	600	.....	13
Bradley & Meagher.																		
Bradley No. 1, .....	Blair, .....	8,323	.....	.....	8,323	23	179	23	.....	.....	.....	179	23	.....	.....	15	.....	1
Bradley Nos. 2 and 3, .....	Blair, .....	16,067	.....	50	16,717	34	179	34	.....	.....	.....	.....	34	.....	.....	15	.....	19
Total, .....	.....	25,000	.....	50	25,000	77	179	77	.....	.....	.....	.....	77	.....	.....	30	.....	20
E. Eichelberger & Co.																		
Fisher, .....	Huntingdon, .....	18,455.1	.....	150	18,505.1	35	277	35	.....	.....	.....	.....	35	.....	.....	300	500	4
Bacon, .....	Bedford, .....	14,579.9	.....	50	14,579.9	31	265	31	.....	.....	.....	.....	31	.....	.....	75	100	4
Total, .....	.....	32,985	.....	200	33,185	66	271	66	.....	.....	.....	.....	66	.....	.....	375	2,600	8





TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Clearfield Bit. Coal Corp.														
West Branch, .....		234,348	4,085	419	239,452	.....	.....	225	279	.....	1	1,100	250	20
Taylor & McCoy.														
Gallitzin shaft, .....		60,295.55	1,950	2,872.98	149,957.53	52,251	238	229.6	315	1	.....	756	.....	26
El Mora Coal Co.														
El Mora Nos. 1 and 2, .....		52,500	.....	200	52,700	.....	.....	248	98	.....	.....	400	.....	8
Glen White Coal and Lumber Co.														
Glen White, .....		20,249	2,304	2,302	66,389	28,422	80	247	147	1	.....	700	.....	12
Great Eastern Seaboard Coal Co.														
Cambria No. 3, .....		19,254.11	951.03	905.03	21,111.02	.....	.....	119	87	.....	.....	150	.....	10
E. R. Jackman & Co.														
Maucher, .....		61,163	1,000	20	62,163	.....	.....	205	104	.....	3	300	50	8
Vinton Colliery Co.														
Vinton, .....		74,467	1,000	.....	75,467	.....	8	271	145	.....	.....	711	270	7
J. J. McGenigal.														
Patton No. 3, .....		23,860	.....	40	23,900	.....	.....	151	36	.....	.....	150	15	3
Knight & Co.														
Alpha, .....		17,263.8	.....	.....	17,263.8	.....	.....	150	36	.....	.....	99	250	3
Deringer Bros.														
Susquehanna, .....		22,786.38	.....	250	23,036.38	.....	.....	171	45	.....	.....	220	.....	4



TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Saxton Furnace Co.														
Metrose, .....		35,836	.....	259	36,065	.....	.....	296	100	.....	.....	200	.....	11
Jackson & Walker.														
Black Diamond, .....		6,240	.....	49	6,289	.....	.....	142	18	.....	.....	60	.....	1
Bennington Coal and Coke Co.														
Bennington, .....		31,161	3,110	466	34,737	1,291	50	121.4	71	.....	.....	210	.....	9
Grand total, .....		4,228,793.66	76 619.89	40,905.74	5,022,345	423,642	1,344	1188	9,177	8	22	32,670	22,459	842

\*Average.

TABLE II—Continued.

Names of Operators.	County.	Number of Boilers.			Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.		
		Cylindrical.				Steam.	Air.	Electric.									
		Horse power.	Tubular.	Horse power.													
Webster Coal and Coke Co.,	.....	8	350	8	830	1,180	1	.....	6	11	1,900	2	2	838	512	3	2
Beech Creek Coal and Coke Co.,	.....	4	100	11	790	890	.....	.....	2	4	120	18	2	1,272	540	2	4
Clearfield and Cresson Coal and Coke Co.,	.....	.....	.....	5	110	380	1	.....	.....	5	380	1	1	200	100	.....	.....
Barnes & Tucker,	.....	7	735	.....	.....	735	.....	.....	1	4	650	4	3	500	300	3	1
Altoona Coal and Coke Co.,	.....	4	160	2	200	360	1	.....	.....	4	.....	2	.....	.....	.....	.....	2
Empire Coal Mining Co.,	.....	.....	.....	3	260	260	.....	.....	1	4	130	3	.....	35	30	1	1
Crescent Coal Mining Co.,	.....	.....	.....	2	140	140	.....	.....	.....	1	60	1	.....	980	500	.....	.....
John Langdon,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colonial Iron Co.,	.....	.....	.....	3	145	225	.....	.....	.....	4	220	2	.....	600	400	.....	.....
Morrisdale Coal Co.,	.....	.....	.....	2	140	140	.....	.....	.....	4	95	2	.....	450	375	.....	.....
Robertsdale Iron Co.,	.....	10	300	7	540	840	.....	.....	.....	2	310	5	.....	4,600	2,100	1	.....
W. H. Sweet,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
P. Geo. Hickes,	.....	.....	.....	.....	.....	.....	.....	.....	2	5	325	.....	.....	.....	.....	3	.....
Lackawanna Coal and Coke Co.,	.....	.....	.....	3	325	325	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allport Coal Co.,	.....	.....	.....	2	200	200	.....	.....	.....	.....	.....	1	.....	150	.....	1	.....
Rembrandt Peale,	.....	1	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bradley & Meagher,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stirling Coal Co.,	.....	.....	.....	4	600	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E. Etchelberger & Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Walnut Coal Co.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Durcan & Spangler,	.....	.....	.....	6	540	540	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maderia Hill Coal Mining Co.,	.....	.....	.....	2	160	160	.....	.....	.....	.....	.....	2	.....	150	50	.....	2
Dunwiddie & Hirsh,	.....	.....	.....	2	80	80	.....	.....	.....	.....	105	.....	.....	.....	.....	.....	1
Clearfield Bituminous Coal Corporation.	.....	.....	.....	3	260	260	.....	.....	1	2	170	2	.....	70	50	1	2
West Branch,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Taylor & McCoy.	.....	.....	.....	.....	.....	400	.....	.....	.....	5	370	.....	.....	.....	.....	1	.....
Gallitzin shaft	.....	8	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



TABLE II—Continued.

Names of Operators.	County.	Number of Boilers.			Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Cylindrical.	Tubular.	Horse power.		Steam.	Alr.	Electric.							
Elmora Nos. 1 and 2, .....	Elmora Coal Co. ....														2
Glen White Coal and Lumber Co. ....	Glen White, .....	4	1	40	130	1			4		1	800	400		
Great Eastern Seaboard Coal Co. ....	Cambria No. 3, .....		3	200	200				1	100	1	800	400	1	
E. R. Jackman & Co. ....	Maucher, .....	1	35		35										
Vinton Colliery Co. ....	Vinton, .....		2	100	200				2	100					1
Patton No. 3, .....	N. T. McGonigal. ....										1	200	200		
Alpha, .....	Knight & Co. ....														
Susquehanna, .....	Deringer Bros. ....														
Kearney, .....	Joseph E. Thropp. ....		3	300	300			1	1	175	1	160	80	1	1
Fulton, .....	Gates Bros. ....														
Rich Hill Coal Co. ....	Rich Hill, .....		1	50	50				1	20	1	100	50		1
											1	75	50		1

[illegible]

TABLE III.—Showing the number of employees at each Colliery in the Tenth Bituminous District during the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.		All other employes.	Total outside.
Webster Coal and Coke Co.		1	...	146	...	13	4	12	176	1	3	3	2	...	1	7	17	193
Webster Colliery No. 1.	Cambria.	1	...	40	...	4	1	3	49	...	...	...	...	...	1	2	7	56
Webster Colliery No. 9.	Cambria.	1	...	190	...	26	13	41	271	1	7	5	7	75	3	20	118	389
Webster Colliery No. 10.	Blair.	1	...	80	...	7	1	12	111	...	1	...	...	322	1	3	38	139
Webster Colliery No. 11.	Cambria.	1	...	100	...	10	5	22	148	1	4	5	1	56	1	12	74	222
Webster Colliery No. 12.	Cambria.	1	...	60	...	4	2	2	68	...	1	2	...	...	...	...	...	68
Webster Colliery No. 13.	Cambria.	1	...	40	...	5	2	10	58	...	1	2	...	...	...	2	5	63
Total.		7	...	666	...	69	27	102	871	3	17	18	11	157	7	46	259	1,130
Beech Creek Coal and Coke Co.		1	...	100	...	10	8	44	163	...	2	3	...	...	6	5	16	179
Pardoe No. 3.	Cambria.	2	...	100	...	6	5	47	160	...	2	3	...	...	...	3	8	168
Pardoe No. 4.	Cambria.	1	...	50	...	5	4	26	86	...	1	3	...	...	...	3	7	93
Pardoe No. 5.	Cambria.	1	...	40	...	5	2	26	74	...	...	...	...	...	...	...	2	76
Pardoe No. 6.	Cambria.	1	...	180	...	12	10	79	252	...	3	4	...	...	...	6	15	247
Flanigan Run No. 8.	Cambria.	1	...	40	...	4	1	7	53	...	1	...	...	...	...	...	3	56
Flanigan Run No. 9.	Cambria.	1	...	120	...	3	2	48	182	...	2	2	...	...	...	...	9	191
Columbia Run No. 12.	Cambria.	1	...	60	...	2	2	14	60	...	1	...	...	...	...	...	3	83
Moshannon No. 13.	Cambria.	1	...	50	...	2	2	5	60	...	1	...	...	...	...	2	3	63
Ashcroft No. 14.	Cambria.	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.		10	...	740	...	55	33	286	1,140	...	13	15	...	...	6	32	66	1,206

Cresson and Clearfield Coal and Coke Co.									
Richard	Cambria,	1	41	3	45	.....	.....	.....	.....
Dean No. 8,	Cambria,	1	150	4	1	.....	.....	.....	.....
Dean No. 9,	Cambria,	1	176	2	1	.....	.....	.....	.....
Dean No. 10,	Cambria,	1	76	10	1	.....	.....	.....	.....
Total,		3	397	3	22	2	339	.....	.....
Barnes and Tucker Coal Co.									
Lancashire No. 6,	Cambria,	1	65	1	4	.....	.....	.....	.....
Lancashire No. 7,	Cambria,	1	105	16	6	4	.....	.....	.....
Lancashire No. 2,	Cambria,	1	130	16	6	4	.....	.....	.....
Lancashire No. 3,	Cambria,	1	106	11	2	2	.....	.....	.....
Lancashire No. 4,	Cambria,	1	5	.....	.....	.....	.....	.....	.....
Lancashire No. 9,	Cambria,	1	29	.....	.....	.....	.....	.....	.....
Juniata,	Cambria,	1	40	.....	.....	.....	.....	.....	.....
Total,		6	413	44	20	12	497	.....	.....
Altoona Coal and Coke Co.									
Delaney	Cambria,	1	332	.....	34	1	.....	.....	.....
Horse Shoe,	Blair,	1	58	.....	8	3	1	.....	.....
Total,		2	390	.....	42	4	1	430	.....
Empire Coal Mining Co.									
Empire,	Cambria,	1	181	6	7	2	31	298	.....
Eclipse,	Cambria,	1	20	3	.....	.....	24	1	.....
Total,		2	200	9	7	2	32	299	.....
Crescent Coal Mining Co.									
Crescent No. 1,	Bedford,	1	89	.....	10	4	2	176	.....
Crescent No. 2,	Bedford,	1	81	.....	7	2	4	96	.....
Crescent No. 3,	Bedford,	1	41	.....	3	1	2	48	.....
Crescent No. 4,	Bedford,	1	4	.....	.....	.....	.....	4	.....
Total,		3	215	.....	20	7	8	253	.....
John Langdon.									
Cambria No. 1,	Bedford,	1	50	.....	7	3	2	63	.....
Chevington No. 1,	Bedford,	1	8	.....	9	.....	.....	9	.....
Chevington No. 2,	Bedford,	1	18	.....	3	1	2	25	.....
Total,		2	76	.....	11	4	4	37	.....
Colonial Iron Co.									
Durham No. 1,	Bedford,	1	74	3	8	2	2	90	.....
Durham No. 2,	Bedford,	1	80	2	8	3	1	95	.....
Total,		2	154	5	16	5	3	185	.....







TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.		All other employes.	Total outside.
Madeira Hill Coal Mining Co.																		
Manion.	Cambria.	1	50	4	2	8	65				1	1	1	1	1	2	6	71
Spangler.	Cambria.	1	40	2	2	1	46								1	2	4	50
Total.		2	90	6	4	9	111				1	1	2		2	4	10	121
Dunwiddle & Hirsh.																		
Nant Y Glo No. 1.	Cambria.	1	62	3	2	2	70		1	1	1	1			1	2	6	76
Nant Y Glo No. 2.	Cambria.	1	11	1	1		13									1	1	14
Total.		2	73	4	2	2	83		1	1	1	1			1	3	7	90
Recapitulation.																		
Webster Coal and Coke Co.	Cam. & Blair	7	666	69	27	102	871		3	17	18	11	157	7	46	259	1,130	
Beech Creek Coal and Coke Co.	Cambria.	10	740	55	39	296	1,140			13	15			6	32	66	1,246	
Cresson and Clearfield Coal and Coke Co.	Cambria.	3	307	3	2	2	339			3	4	4		2	10	21	360	
Barnes and Tucker Coal Co.	Cambria.	6	413	20	12	2	497		5	5	5	2		4	7	28	525	
Altona Coal and Coke Co.	Cambria.	2	380	42	4	1	439			6	6	3		2	47	63	592	
Empire Coal Mining Co.	Cam. & Blair	2	200	9	2	32	252			1	3	3		2	14	23	275	
Crescent Coal Mining Co.	Bedford.	2	215	20	7	8	253				4	1		3	12	20	273	
John Langdon.	Bedford.	2	76	11	4	4	97							2	8	12	109	

Colonial Iron Co.,	Bedford,	154	5	16	5	2	185	.....	4	5	2	51	2	4	68	253
Morrisdale Coal Co.,	Bedford,	37	.....	28	2	5	182	.....	5	12	.....	8	2	4	193	192
Robertsdale Iron and Coal Co.,	Huntingdon,	313	.....	22	9	27	328	.....	5	.....	.....	.....	2	.....	233	402
W. H. Sweet,	Huntingdon,	126	13	.....	.....	14	157	.....	4	.....	.....	.....	.....	15	4	161
P. Geo. Hickes,	Huntingdon,	41	.....	4	.....	.....	46	.....	1	.....	.....	.....	.....	.....	3	49
Lackawanna Coal and Coke Co.,	Cambria,	114	6	14	.....	7	143	.....	4	3	.....	.....	.....	.....	19	162
Allport Coal Co.,	Cambria,	150	.....	8	3	3	167	.....	2	.....	.....	.....	.....	.....	3	162
Rembrandt Peale,	Cambria,	126	.....	7	.....	2	138	.....	2	2	2	.....	2	2	11	178
Stirling Coal Co.,	Cambria,	143	4	11	6	31	197	.....	2	1	.....	.....	1	6	12	150
Bradley & Meagher,	Blair,	60	.....	8	2	.....	72	.....	1	.....	.....	.....	1	7	11	208
Walnut Run Coal Co.,	Cambria,	55	.....	3	2	.....	62	.....	1	.....	.....	.....	2	2	5	77
E. Eichleberger & Co.,	Hun. & Bed.	53	.....	7	1	1	64	.....	.....	.....	.....	.....	.....	.....	8	70
Madison & Shafter,	Cambria,	210	9	12	8	2	243	.....	4	5	.....	.....	3	.....	1	66
Madison & Shafter,	Cambria,	50	.....	6	4	9	111	.....	1	1	.....	.....	.....	9	21	264
Dunwiddie & Hirsch,	Cambria,	73	.....	4	2	2	83	.....	1	1	.....	.....	2	4	10	121
															7	90

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total, inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Employed in the manufacture of coke.	Superintendents, and clerks.		All other employes.	Total outside.
Clearfield Bituminous Coal Corporation.																		
West Branch, .....	Cambria,.....	1	2	183	14	16	2	32	250	.....	1	3	6	.....	1	16	27	277
Taylor & McCoy.																		
Gallitzin shaft, .....	.....	2	.....	182	.....	20	8	31	243	.....	1	3	7	56	3	2	72	315
Elmora Nos. 1 and 2, .....	Cambria,.....	1	.....	80	2	6	2	4	95	.....	1	.....	.....	.....	.....	2	3	98
Glen White Coal and Lumber Co.																		
Glen White, .....	Blair,.....	1	.....	85	4	8	3	4	105	1	1	4	.....	.....	3	33	42	147
Great Eastern Seaboard Coal Co.																		
Cambria No. 3, .....	Bedford,.....	1	.....	66	.....	10	2	3	82	.....	.....	2	.....	.....	1	2	5	87
E. R. Jackman & Co.																		
Maucher, .....	Cambria,.....	1	.....	91	.....	3	1	5	101	.....	1	1	1	.....	.....	.....	3	104
Vinton, .....	Vinton Colliery Co.	1	.....	34	.....	5	.....	91	131	.....	2	2	.....	.....	2	8	14	145
J. J. McGonigal.																		
Patton No. 3, .....	Cambria,.....	1	.....	31	.....	2	.....	.....	34	.....	1	.....	.....	.....	1	.....	2	36

Alpha, .....	Knight & Co.	Cambria,.....	1	.....	30	.....	1	1	2	.....	35	.....	1	.....	1	36
Susquehanna,.....	Iwinger Bros.	Cambria,.....	1	.....	40	.....	2	.....	.....	.....	43	.....	1	1	2	45
Kearney, .....	Joseph E. Thrupp.	Bedford,.....	1	.....	105	2	15	7	10	.....	140	.....	2	2	4	220
Fulton, .....	Gates Bros.	Bedford,.....	1	.....	30	1	3	2	4	.....	41	.....	1	1	4	45
Rich Hill, .....	Rich Hill Coal Co.	Cambria,.....	1	.....	25	.....	2	.....	1	.....	29	.....	.....	1	.....	30
Gussie, .....	Spangler Coal and Coke Co.	Cambria,.....	1	.....	30	1	1	.....	.....	.....	33	1	.....	1	1	37
Daugherty No. 2, .....	Daugherty Coal Co.	Cambria,.....	1	.....	10	.....	1	.....	.....	.....	12	.....	.....	1	.....	13
Warner, .....	Lamblith Coal Co.	Bedford,.....	1	.....	40	.....	6	1	.....	.....	48	.....	2	.....	3	53
Kelley No. 1, .....	Kelley & Flanagan.	Cambria,.....	1	.....	8	.....	1	.....	.....	.....	10	.....	.....	1	2	13
Stirling No. 10, .....	John Harvey & Co.	.....	.....	.....	9	.....	1	.....	.....	.....	10	1	.....	.....	.....	11
Greenwich Coal and Coke Co.	Greenwich No. 4, .....	.....	1	.....	18	.....	1	.....	.....	.....	20	.....	.....	2	.....	22
Ivory Hill, .....	Barker & McDill.	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	5
Flinton, .....	S. V. Davis & Co.	Cambria,.....	1	.....	7	1	2	.....	.....	.....	11	.....	.....	1	.....	12
Oak Ridge, .....	Oak Ridge Coal and Coke Co.	Cambria,.....	1	.....	71	3	6	3	.....	.....	84	1	2	2	1	109
Cymbria, .....	Cymbria Coal Co.	Cambria,.....	1	.....	94	.....	3	2	2	.....	102	.....	2	2	2	111
Big Bend, .....	Black Lick Mining Co.	Cambria,.....	1	.....	105	.....	5	3	4	.....	118	1	3	4	1	130
Blacks, .....	A. J. Black.	Huntingdon, .....	1	.....	46	.....	4	1	1	.....	53	1	1	.....	1	57
Lincoln, .....	Lincoln Coal Co.	Cambria,.....	1	.....	18	1	2	1	.....	.....	23	.....	.....	1	1	2





TABLE III.—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Webster Coal and Coke Co., .....	Cambria and Blair.	18.8	14.5	18.4	19.2	19	16	16.2	19	18.3	21.5	20	21.8
Beech Creek Coal and Coke Co., .....	Cambria, .....	13.5	10.5	16.5	15	11.5	15	16.2	15.2	17	16.3	16.3	15.5
Bresson and Clearfield Coal and Coke Co., .....	Cambria, .....	16	12.2	16	15	13.5	10	11	11	13	11	13	13
Brown and Tunkin Coal Co., .....	Cambria, .....	18	14	15.5	16.5	16.4	15	17	14.4	17.4	16.6	13.3	16.5
Altmore Coal and Coke Co., .....	Cambria and Blair.	19	20.5	24.5	20.5	20	19.5	19.5	19.5	19.5	26.5	25	24.5
Emure Coal Mining Co., .....	Cambria, .....	24	21.5	22.5	23.5	19.5	19.5	13	12	9.5	15.5	23.5	14
Crescent Coal Mining Co., .....	Bedford, .....	25	23.3	25	17	15	18	14	21	22	22	23	21
John Langdon, .....	Bedford, .....	20	19	21	12	18	19.5	15	23	23	17	23	21
Colonial Iron Co., .....	Bedford, .....	17.5	26	25	23	26	25	26	24	26	21.5	23	23
Morrisdale Coal Co., .....	Huntingdon, .....	.....	9.5	24.5	23.5	21	18	24	24.5	17.5	26.5	23.5	21
Robertson Iron and Coal Co., .....	Huntingdon, .....	35	16.5	24.5	20	.....	18	22	21	22	21	22	21
W. H. Sweet, .....	Huntingdon, .....	23	19	22	21	21	19	20	21	22	20	23	24
P. Geo. Hickes, .....	Huntingdon, .....	13	18	19	21	19	21	19	24	22	20	15	17
Lackawanna Coal and Coke Co., .....	Cambria, .....	18	17	13.5	19	19.5	13	14.5	14	16	18	16	17
Allport Coal Co., .....	Cambria, .....	17.5	12.5	21.5	21	19.5	15.5	20.5	16	8.5	16	17.5	15
Rembrandt Peale, .....	Cambria, .....	16	21	25	22	21	25	17	25	22	21.5	23.5	20
Blair and Meacher, .....	Blair, .....	12	7	17	13	6	11	7	10	12	13	18	28
Walnut Run Coal Co., .....	Cambria, .....	2	12	15	18	16	14	15	19	16	17	18	18
E. Eichelberger & Co., .....	Hun and Bedford, .....	26.5	22.5	23.5	21.5	23.5	21.5	5	22	25	17	26	24.5
Duncan & Spangler, .....	Cambria, .....	18	12	10	9	6	7	5	9	7	8.5	10	13
Madeira Hill Coal Mining Co., .....	Cambria, .....	15	4.5	22	15.5	6.5	6	4.5	12	10	13	10	13
Dunwidale & Hirsch, .....	Cambria, .....	9	8	11.5	9	13	11	6	9	16.5	8.5	8	12
Clearfield Bituminous Coal Corporation.													
West Branch, .....	Cambria, .....	23	19	20	23	22	17	17	10	10	18	15	21
Gallitzin shaft, .....	Cambria, .....	20.3	14.3	19.2	16.9	18.9	20.4	19.1	20.3	21.8	17.9	20.2	20.5
Elmora Nos. 1 and 2, .....	Cambria, .....	19	22	24	23	23	25	21	24	18	23	19	17
Glen White Coal and Lumber Co.													
Glen White, .....	Blair, .....	21	19	21	20	20	21	22	21	19	20	21	22

TABLE III—Continued.

Names of Operators and Collieries.	County.	Number of Days Worked in Each Month.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Great Eastern Seaboard Coal Co. Cambria No. 3, .....	Bedford, .....	16	12	16	4	3	15	3	.....	.....	8	20	22
Maucher, .....	Cambria, .....	19	13	23	17	21	19	15	17	14	15	20	12
Vinton Colliery Co. Vinton, .....	Cambria, .....	24	22	24	22	26	24	24	23	14	24	24	20
Patton No. 3, .....	Cambria, .....	18	15	15	20	13	.....	6	10	12	14	15	13
Alpha, .....	Cambria, .....	2	12	19	14	8	18	9	12	15	14	12	15
Susquehanna, .....	Cambria, .....	18	15	20	19½	18	16½	9	4	10	9	17	15
Kearney, .....	Bedford, .....	25	24	26	26	6	.....	.....	.....	.....	.....	.....	23
Fulton, .....	Bedford, .....	24	22	24	24	22	21	20	19	20	20	24	24
Rich Hill, .....	Cambria, .....	.....	.....	.....	15	17	14	13	14	7½	7	7	13
Gussie, .....	Cambria, .....	14	13	20	14	4	7	2	6	12	14	21	23
Daugherty No. 2, .....	Cambria, .....	23	12	22	17	12	16	17	20	16	26	20	18

	Warner,	Lambirth Coal Co.	Bedford,								20	13	21
Kelley No. 1,	Kelley & Flanagan.		Cambria,										
Stirling No. 10,	John Harvey & Co.												
Greenwich No. 1,	Greenwich Coal and Coke Co.										13	21	14
Ivory Hill,	Barker & McBill.												8½
Flinton,	S. V. Davis & Co.		Cambria,										
Oak Ridge,	Oak Ridge Coal and Coke Co.		Cambria,										
Cymbria,	Cymbria Coal Co.	23	24	26	20	16	11	18	17	23	22	24	
Big Bend,	Black Lick Mining Co.	18	17	20	17	17	16	21	19	18	17	22	
Blacks,	A. J. Black.	13	10	12	14	9	12	8½	11½	14	12	8½	13
Lincoln,	Lincoln Coal Co.	23	21	24	26	22	21	22	21½	21	22	20	21½
Puritan No. 4,	Puritan Coal Mining Co.					11	21	15	15	8	9	13	9
Melrose,	Saxton Furnace Co.	13	17	7	12	6	10	8	9	13	7	9	15
Black Diamond,	Jackson & Walker.	25	23	25	25	25	26	25	27	23	22	25	24
Bennington,	Bennington Coal and Coke Co.	12	14	15	14	8	15	6	6	10	13	13	16
		16.5	14.1	11.3	17.6	62	5.6	7	4.5	4.6	8.9	6.2	18.9

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Tenth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 5	Martin Fura, .....	Hungarian.	Miner, .....	39	M.	1	1	Glen White, .....	Blair, .....	Killed by a fall of coal. This man fired a shot in the coal and he lay down under the loose end to mine it deeper. He was warned by his companion, but he paid no attention.
May 20	John Koran, .....	Slav, .....	Miner, .....	38	M.	1	1	Vinton No. 1, .....	Cambria, ....	Fatally injured by fall of coal.
June 14	Nickel Vancoski, .....	Pole, .....	Miner, .....	59	M.	1	1	Brawley, .....	Cambria, ....	Killed by a stone falling upon him.
	John Lowrie, .....	American, ..	Miner, ..	23	S.	1	1	Ocean No. 2, .....	Huntingdon,	Killed by the explosion of a stick of dynamite. John Lowrie and his brother had charged a shot in the bottom rock before leaving the mine on the 13th; they had one stick of dynamite and it exploded in the bottom rock. Next morning they cleaned up the rock and finding a piece of rock over the back of the hole, they placed two steel wedges in the hole and sledged them in, when the stick of dynamite which had not exploded with the powder, exploded, nearly blowing John Lowrie's head off.
25	Clinton J. Jordan, .....	American, ..	Machine runner	34	M.	1	2	Lackawanna No. 1,	Cambria, ....	Killed by electricity. The current charged the machine while he was setting the jack in the roof.
Aug. 23	Joseph Colena, .....	Pole, .....	Miner, .....	29	M.	1	1	Maucher, .....	Cambria, ....	Fatally injured by fall of roof.
Sept. 7	John Walsh, .....	Hungarian,	Cager, .....	19	S.	1	1	Taylor & McCoy, ...	Cambria, ....	Killed by the cage coming down on him while he was engaged with others in hanging the lamp.
Dec. 16	Andrew Feigel, .....	Slav, .....	Miner, .....	28	M.	1	3	Ashcroft, .....	Cambria, ....	Killed by a fall of coal. He had failed to sprag the coal. His attention was called to the danger, but he said it never had fallen, and would not fall on him.



TABLE V—List of non-fatal accidents that occurred in and about the mines of the Tenth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age	Married or single.		Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 10	Eugene Bradley, .....	American, .....	Miner, .....	41	S.	Maucher, .....	Cambria, ....		Concussion of the spine and ankle broken by a fall of roof.
14	John Whiteman, .....	German, .....	Miner, .....	45	M.	Pardue No. 4, .....	Cambria, ....		Injured by cars.
17	Bob Tredgeek, .....	Italian, .....	Miner, .....	29	S.	Delaney, .....	Cambria, ....		Burned by a blown out shot.
17	Maurice Paterina, .....	Italian, .....	Miner, .....	36	M.	Delaney, .....	Cambria, ....		Burned by a blown out shot.
24	Wright Coop, .....	English, .....	Miner, .....	35	M.	Empire, .....	Cambria, ....		Fall of coal.
28	S. E. Everhart, .....	American, .....	Pumpman, .....	45	M.	Woodvale shaft, .....	Huntingdon, .....		Injured by falling 12 feet; he stepped off the landing, dislocating his hip.
March 5	Frank Wright, .....	English, .....	Miner, .....	51	S.	Woodvale shaft, .....	Huntingdon, .....		Three ribs broken by a prop falling on him.
14	Blair Rutlege, .....	American, .....	Driver, .....	20	S.	Maucher, .....	Cambria, ....		Knee cap injured by a lever while putting a car on the track.
19	Luke Elder, .....	American, .....	Miner, .....	50	M.	Delaney, .....	Cambria, ....		Injured about the body by cars.
26	John L. Ivy, .....	American, .....	Driver, .....	28	S.	Woodvale shaft, .....	Huntingdon, .....		Arm broken by fall of coal.
April 23	Harry Watson, .....	American, .....	Civil engineer, .....	25	S.	Stirling No. 8, .....	Cambria, ....		Leg broken; caught between car and rib.
May 6	Thos. Willits, .....	English, .....	Miner, .....	34	M.	Empire, .....	Cambria, ....		Fractured rib by fall of roof.
July 12	Willie Buscott, .....	Lithuanian, .....	Miner, .....	22	S.	Hurlton No. 4, .....	Cambria, ....		Injured by fall of rock.
Aug. 2	John Shenetki, .....	Hungarian, .....	Car driver, .....	22	S.	Vinton No. 2, .....	Cambria, ....		Four ribs broken by cars.
29	Axel Swanson, .....	American, .....	Miner, .....	13	S.	Planagan No. 8, .....	Cambria, ....		Foot crushed, necessitating amputation, by coal rolling upon him.
Sept. 20	Arthur Hockingsburg, .....	American, .....	Miner, .....	23	S.	Woodvale shaft, .....	Huntingdon, .....		Back seriously injured by fall of rock.
15	John Prouski, .....	Pole, .....	Miner, .....	37	M.	Planagan No. 6, .....	Cambria, ....		Leg broken by fall of coal.
16	John Fosock, .....	Hungarian, .....	Miner, .....	36	M.	Planagan No. 8, .....	Cambria, ....		Fracture of leg by coal rolling on him.
24	Jos. Buerbaug, .....	American, .....	Brakeman, .....	32	M.	Webster No. 7, .....	Cambria, ....		Leg broken by a motor.
Dec. 13	Bruce Lane, .....	American, .....	Driver, .....	31	M.	Robertsdale, .....	Huntingdon, .....		Seriously injured; fell under cars.
13	John Polinski, .....	Pole, .....	Miner, .....	45	M.	Robertsdale, .....	Huntingdon, .....		Injured by fall of roof.



# Eleventh Bituminous District.

WESTMORELAND, FAYETTE AND ALLEGHENY COUNTIES.

Scottdale, Pa., March 17, 1902.

Hon. James W. Latta, Secretary of Internal Affairs:

Sir: In compliance with the provision of the act of Assembly, approved May 15, 1893, relating to the Bituminous coal mines of Pennsylvania. I herewith submit my first annual report as Inspector of Mines for the Eleventh Bituminous Coal District for the year ending December 31, 1901.

It contains the usual statistical tables, together with a brief description of the mines, their condition and the improvements made during the year, which is very satisfactory with but few exceptions, and in such cases when I have had cause to complain, I am pleased to state that I have found the operators very willing to correct the evils.

There is also a description of the fatal accidents numbering forty-five. I very much regret to report such an exceedingly great number; there are fifty-three non-fatal ones, together with a summary of the statistics contained in the tables. All of which is respectfully submitted.

W. J. MOLLISON,  
Inspector.

## Summary of Statistics 1901.

Number of mines in the district, .....	63
Number of mines exhausted and abandoned during the year, .....	2
Number of new mines opened during the year, .....	3
Number of persons employed inside, .....	6,581
Number of persons employed outside, .....	628
Total number of persons employed in production of coal, .....	7,309
Total number of persons employed in manufacture of coke, .....	3,446
Total number of employes, .....	10,755
Number of tons of coal produced, .....	8,172,143

Number of tons used in the manufacture of coke, ....	6,470,595
Number of tons shipped, .....	1,476,477
Number of tons used at mines for steam and heat, ..	139,518
Number of tons sold to employes and others, .....	85,553
Average number of tons produced per life lost, ....	190,050
Average number of tons of coal produced per employee, .....	1,118
Number of fatal accidents in production of coal, ...	43
Number of non-fatal accidents, .....	53
Average number of tons produced per non-fatal accident, .....	154,199
Total number of accidents in production of coal, ...	96
Average number of tons produced per accident, ....	85,126.58
Average number of persons employed per fatal accident in the production of coal, .....	250
Average number of persons employed per non-fatal accident, .....	203
Number of wives made widows by accidents, .....	35
Number of orphans by accidents, .....	70
Number of coke ovens in the district, .....	8,778
Number of tons of coke produced, .....	4,360,559
Number of fatal accidents in production of coke, ....	2
Average number of tons of coke produced per life lost, .....	2,180,279.50
Average number of persons employed per life lost, ..	1,724
Number of kegs of powder used, .....	13,790
Number pounds of dynamite used, .....	8,783
Number of animals used in and about the mines, ...	1,165

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TABLE A—Total Production of Coal, the Number of Persons Employed by Each Company During the Year 1901, and the Average Number of Tons Produced Per Each Employee.

	Number of tons produced.	Number of persons employed.	Number of tons produced per employe.
H. C. Frick Coke Co., .....	4,023,244	3,340	1,204.54
Pittsburg Coal Co., .....	1,007,888	1,229	820.08
South West Connellsville Coke Co., .....	1,241,364	870	1,426.85
Hecla Coke Co., .....	616,912	481	1,282.56
Continental Coke Co., .....	338,552	297	1,139.91
Bessemer Coke Co., .....	197,485	144	1,371.42
W. J. Rainey, .....	177,234	156	1,136.11
Painter & Fogg, .....	22,172	38	583.48
Penn Gas Coal Co., .....	39,639	108	329.99
Cochran Bros., .....	39,119	39	1,003.05
Laughlin & Co., Limited, .....	9,534	16	595.87
B. F. Keister & Co., .....	31,628	25	1,265.12
Pennsville Coke Co., .....	57,008	46	1,221.91
American Sheet Steel Co., .....	36,358	27	1,347.70
J. R. Stauffer & Co., .....	20,049	15	1,336.60
Mt. Pleasant Coke Co., .....	13,433	67	200.66
J. W. Shields, .....	163,303	198	824.76
Bowman Bros., .....	16,800	30	560.00
Amyville, Youghiogeny Gas Coal Co., .....	47,437	70	677.67
J. W. Overholt, .....	22,954	10	2,295.40
Total and average, .....	8,172,143	7,206	1,134.07

TABLE B—Total Production of Coke, Number of Persons Employed in its Manufacture by Each Company During the Year 1901, and the Average Number of Tons Produced per Employee.

	Number of tons produced.	Number of persons employed.	Number of tons produced per employe.
H. C. Frick Coke Co., .....	2,524,203	2,095	1,204.87
Pittsburg Coal Co., .....	19,977	25	799.08
South West Connellsville Coke Co., .....	774,050	586	1,320.90
Hecla Coke Co., .....	437,597	258	1,696.10
Continental Coke Co., .....	220,328	134	1,644.20
Bessemer Coke Co., .....	110,125	105	1,048.81
W. J. Rainey, .....	116,377	68	1,711.42
Painter & Fogg, .....	16,625	24	692.70
Cochran Bros., .....	29,196	20	1,459.80
Laughlin & Co., Limited, .....	6,176	5	1,235.20
B. F. Keister & Co., .....	22,425	15	1,495.00
Pennsville Coke Co., .....	42,705	33	1,294.00
J. R. Stauffer & Co., .....	15,324	9	1,702.60
Mt. Pleasant Coke Co., .....	8,742	63	138.70
J. W. Overholt, .....	16,709	8	2,088.60
Total and average, .....	4,360,559	3,448	1,264.65



TABLE C—Number of Fatal Accidents and Tons of Coal Produced per Life Lost, the Number of Non-Fatal Accidents and Number of Tons Produced per Non-Fatal. Total Number of Accidents and Number of Tons Produced per Accident.

	Number of fatal accidents.	Number of tons produced per life lost.	Number of non-fatal accidents.	Number of tons produced per non-fatal accident.	Total number of accidents.	Number of tons produced per accident.
H. C. Frick Coke Co., .....	16	251,452.75	21	191,583.05	37	108,736.32
Pittsburg Coal Co., .....	29	50,394.40	19	53,946.79	39	25,843.28
S. W. C. C. Co., .....	2	620,682.00	6	206,894.00	8	155,170.50
Hecla Coke Co., .....	1	616,912.00	1	616,912.00	2	616,912.00
Continental Coke Co., .....	1	169,276.00	1	338,552.00	2	112,850.66
Bessemer Coke Co., .....	1	197,485.00	1	197,485.00	2	197,485.00
W. J. Rainey, .....	1	177,234.00	1	177,234.00	2	177,234.00
Painter & Fogg, .....	1	22,172.00	1	22,172.00	2	22,172.00
Penn Gas Coal Co., .....	1	89,639.00	2	44,819.50	3	29,579.66
Cochran Bros., .....	1	39,119.00	1	39,119.00	2	39,119.00
Laughlin & Co., Limited, .....	1	9,534.00	1	9,534.00	2	9,534.00
B. F. Keister & Co., .....	1	31,628.00	1	31,628.00	2	31,628.00
Pennsville Coke Co., .....	1	57,008.00	1	57,008.00	2	57,008.00
American Sheet Steel Co., .....	1	36,388.00	1	36,388.00	2	36,388.00
Mt. Pleasant Coke Co., .....	1	13,433.00	1	13,433.00	2	13,433.00
J. R. Stauffer & Co., .....	1	20,049.00	1	20,049.00	2	20,049.00
J. W. Shields, .....	1	163,303.00	1	163,303.00	2	163,303.00
Bowman Bros., .....	1	16,800.00	1	16,800.00	2	16,800.00
Ameyville Gas Coal Co., .....	1	47,437.00	1	47,437.00	2	47,437.00
J. W. Overholt, .....	1	22,954.00	1	22,954.00	2	22,954.00
Grand total and average, .....	133	190,049.83	133	154,191.37	266	85,126.49

TABLE D—Number of Fatal Accidents That Occurred in the Manufacture of Coke, Number of Tons Produced per Life Lost, Number of Tons per Accident Fatal and Non-Fatal.

	Number of fatal accidents.	Number of tons of coke produced per life lost.	Number of non-fatal accidents.	Number of tons of coke produced per non-fatal accident.	Total number of accidents.	Number of tons of coke produced per accident.
H. C. Frick Coke Co., .....	2	1,262,101.5	2	2,524,203.0	4	1,262,101.5
Pittsburg Coal Co., .....	1	19,977	1	19,977	2	19,977
S. W. C. C. Co., .....	1	774,050	1	774,050	2	774,050
Hecla Coke Co., .....	1	437,597	1	437,597	2	437,597
Continental Coke Co., .....	1	220,328	1	220,328	2	220,328
Bessemer Coke Co., .....	1	110,125	1	110,125	2	110,125
W. J. Rainey, .....	1	116,377	1	116,377	2	116,377
Painter & Fogg, .....	1	16,625	1	16,625	2	16,625
Cochran Bros., .....	1	29,196	1	29,196	2	29,196
Laughlin & Co., Limited, .....	1	6,176	1	6,176	2	6,176
B. F. Keister & Co., .....	1	22,425	1	22,425	2	22,425
Pennsville Coke Co., .....	1	42,705	1	42,705	2	42,705
J. R. Stauffer & Co., .....	1	15,324	1	15,324	2	15,324
Mt. Pleasant Coke Co., .....	1	8,742	1	8,742	2	8,742
J. W. Overholt, .....	1	16,709	1	16,709	2	16,709
Grand total and average, .....	2	2,180,279.50	2	2,180,279.50	4	2,180,279.50

TABLE E—Nationality of Persons Killed and Injured

	American.	English.	Welsh.	Scotch.	Irish.	German.	Pole.	Slav.	Austrian.	Hungarian.	Italian.	French.	Bohemian.	Russian.	Total.
Fatal, .....	13	3	1	2	1	2	4	8	2	1	4	1	2	1	45
Non-fatal, .....	13	1	...	1	1	6	10	8	4	...	5	...	1	...	53
Total, .....	26	4	1	3	2	8	14	16	9	1	9	1	3	1	98

TABLE F—Occupations of Persons Killed and Injured.

	Mine superintendent.	Assistant mine superintendent.	Mine foreman.	Asst. mine foreman.	Machine boss.	Machine runner.	Boss driver.	Miner.	Driver.	Pipeman.	Timberman.	Roadman.	Trip rider.	Coal loader.	Laborer.	Oven charger.	Coke drawer.	Total.
Fatal, .....	1	1	4	1	1	1	1	20	3	1	...	4	1	2	2	1	1	45
Non-fatal, .....	1	1	4	1	1	1	29	13	...	1	...	4	1	4	6	...	...	53
Total, .....	1	1	4	1	1	2	1	49	16	1	1	4	1	7	6	1	1	98

TABLE G—Classification of Accidents.

	Mine cars.	Explosion of fire damp.	Falls of roof.	Falls of slate.	Falls of coal.	Falls of coal and slate.	Explosion of coal dust.	Struck by a post.	Electric shock.	Kicked by mule.	Knocked down by hand truck.	Caught by cage.	Fell down shaft.	Fell on dinner bucket.	Fell down against car.	Struck by charging engine.	Run over by larries.	Total.
Fatal, .....	6	19	12	1	...	2	1	...	1	...	...	...	...	1	...	1	1	45
Non-fatal, .....	20	...	6	16	3	...	1	2	...	1	1	1	1	...	1	...	...	53
Total, .....	26	19	18	17	3	2	2	2	1	1	1	1	1	1	1	1	1	98

Table giving name of mine, kind of opening, system of mining and haulage, type and number of mining machines in use, and motive power for same.

Name of Mine.	Kind of opening.	System of Mining.	System of Haulage.	Type of Machine.				Motive power.
				Jeffry.	Morgan & Gardner.	General Electric.	Harrison.	
Eureka, .....	Drift, .....	Pick and machine, .....	Animal and rope, .....	.....	3	.....	.....	Electricity.
Euclid, .....	Shaft, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Electricity.
Port Royal No. 1, .....	Shaft, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Compressed air.
Port Royal No. 2, .....	Shaft, .....	Pick and machine, .....	Animal and rope, .....	.....	.....	.....	.....	Compressed air.
Waverly, .....	Shaft, .....	Pick and machine, .....	Animal and rope, .....	.....	3	.....	.....	Electricity.
Big Chief, .....	Drift, .....	Pick and machine, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Ocean No. 1, .....	Drift, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Electricity.
Osceola, .....	Drift, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Electricity.
Guftay, .....	Drift, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Electricity.
Shaner, .....	Slope, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Electricity.
Yough slope, .....	Slope, .....	Pick and machine, .....	Animal and electric motor, .....	.....	.....	.....	.....	Electricity.
Ayers Hollow, .....	Drift, .....	Pick and machine, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Amyville, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Bowman, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Penn Gas No. 4, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Alverton No. 1, .....	Slope, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Alverton No. 2, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Bessmer Nos. 1 and 2, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Beck, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Calumet, .....	Shaft, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Central, .....	Shaft, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Diamond, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Enterprise, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Pintown, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Neutral No. 2, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Neutral No. 3, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Neutral No. 4, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Mammoth shaft, .....	Shaft, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Mammoth slope, .....	Slope, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Mullin, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.
Painter, .....	Drift, .....	Pick only, .....	Animal and rope, .....	.....	.....	.....	.....	Electricity.



Table giving names of operators, names of collieries, kind of openings, method of ventilation, type of ventilator, capacity of ventilator, size of ventilator, number of persons in mine, average quantity of air per person, number of splits, number of revolutions, capacity of ventilator, number of persons in mine, average quantity of air per person in each split, average quantity of air per person in each split.

Names of Operators.		Names of Collieries.		Kind of opening.		Method of ventilation.		Type of ventilator.		Size of ventilator—feet.		Number of revolutions.		Capacity of ventilator.		Number of persons inside.		Average quantity per person.		Number of currents or splits.	
H. C. Frick Coke Co.	.....	Alverton No. 1.	.....	Slope.	.....	Fan.	.....	Brazil.	.....	12x3½	.....	70	.....	37,865	.....	99	.....	374	.....	3	.....
H. C. Frick Coke Co.	.....	Alverton No. 2.	.....	Drift.	.....	Furnace.	.....	Capell.	.....	12x8x4	.....	60	.....	10,045	.....	59	.....	170	.....	1	.....
W. J. Ratney.	.....	Aome.	.....	Shaft.	.....	Fan.	.....	Irwin.	.....	10x10	.....	60	.....	79,200	.....	111	.....	713	.....	2	.....
Penn Gas Coal Co.	.....	Ayers Hollow.	.....	Drift.	.....	Fan.	.....	.....	.....	12x4½	.....	65	.....	45,000	.....	91	.....	497	.....	2	.....
Anyville Gas Coal Co.	.....	Anyville.	.....	Drift.	.....	Furnace.	.....	.....	.....	10x8x3½	.....	65	.....	12,250	.....	60	.....	204	.....	2	.....
H. C. Frick Coke Co.	.....	Bessemer.	.....	Drifts.	.....	Natural.	.....	.....	.....	.....	.....	.....	.....	6,600	.....	93	.....	313	.....	2	.....
H. C. Frick Coke Co.	.....	Buckeye.	.....	Drift.	.....	Fan.	.....	Brazil.	.....	10x3	.....	60	.....	22,500	.....	143	.....	298	.....	2	.....
M. C. Frick Coke Co.	.....	Big Chief.	.....	Drift.	.....	Fan.	.....	Capell.	.....	12x3½	.....	75	.....	14,600	.....	140	.....	170	.....	2	.....
M. C. Frick Coke Co.	.....	Boys.	.....	Drift.	.....	Fan.	.....	.....	.....	3x3	.....	100	.....	34,630	.....	98	.....	134	.....	1	.....
Bayman Bros.	.....	Bowman.	.....	Drift.	.....	Natural.	.....	.....	.....	.....	.....	.....	.....	7,250	.....	45	.....	134	.....	1	.....
H. C. Frick Coke Co.	.....	Calumet.	.....	Shaft.	.....	Natural.	.....	Kenny.	.....	20x7	.....	60	.....	2,800	.....	24	.....	116	.....	2	.....
H. C. Frick Coke Co.	.....	Central.	.....	Slope.	.....	Fan.	.....	Vulcan.	.....	20x7	.....	65	.....	70,690	.....	135	.....	524	.....	2	.....
H. C. Frick Coke Co.	.....	Diamond.	.....	Drift.	.....	Natural.	.....	.....	.....	20x7	.....	65	.....	70,785	.....	133	.....	532	.....	2	.....
J. R. Stauffer & Co.	.....	Dexter.	.....	Drift.	.....	Natural.	.....	.....	.....	.....	.....	.....	.....	9,400	.....	35	.....	289	.....	1	.....
Pittsburg Coal Co.	.....	Eureka.	.....	Drift.	.....	Fans.	.....	Stine.	.....	6	.....	200	.....	6,625	.....	18	.....	368	.....	1	.....
Pittsburg Coal Co.	.....	Empire.	.....	Shaft.	.....	Fan.	.....	Stine.	.....	10	.....	65	.....	100,800	.....	135	.....	695	.....	2	.....
Bessemer Coke Co.	.....	Enterprise.	.....	Drift.	.....	Furnace.	.....	Brazil.	.....	16x8½	.....	75	.....	43,150	.....	109	.....	396	.....	2	.....
B. F. Keister & Co.	.....	Franklin.	.....	Drift.	.....	Natural.	.....	.....	.....	12x8x3½	.....	.....	.....	24,000	.....	54	.....	444	.....	1	.....
Pittsburg Coal Co.	.....	Gaffney.	.....	Drift.	.....	Furnace.	.....	.....	.....	.....	.....	.....	.....	8,880	.....	26	.....	341	.....	1	.....
H. C. Frick Coke Co.	.....	Hood No. 1.	.....	Drift.	.....	Fan.	.....	Capell.	.....	12x4½x3½	.....	.....	.....	10,420	.....	123	.....	474	.....	1	.....
H. C. Frick Coke Co.	.....	Hood No. 2.	.....	Drift.	.....	Fan.	.....	Brazil.	.....	3x3	.....	75	.....	17,000	.....	170	.....	470	.....	2	.....
H. C. Frick Coke Co.	.....	Hood No. 2.	.....	Drift.	.....	Fan.	.....	Brazil.	.....	20x3½	.....	75	.....	17,000	.....	170	.....	470	.....	2	.....
H. C. Frick Coke Co.	.....	Hood No. 2.	.....	Drift.	.....	Fan.	.....	Brazil.	.....	30x1½	.....	75	.....	85,000	.....	290	.....	293	.....	2	.....
Painter & Fager.	.....	Hunter.	.....	Drift.	.....	Fan.	.....	Stine.	.....	4	.....	50	.....	7,500	.....	27	.....	277	.....	2	.....
Bessemer Coke Co.	.....	Humphrey.	.....	Drift.	.....	Fan.	.....	.....	.....	10x3½	.....	60	.....	32,400	.....	64	.....	506	.....	2	.....
H. C. Frick Coke Co.	.....	Jimtown.	.....	Drift.	.....	Fan.	.....	.....	.....	6	.....	85	.....	40,000	.....	90	.....	450	.....	1	.....
H. C. Frick Coke Co.	.....	Mullin.	.....	Drift.	.....	Fan.	.....	Brazil.	.....	10x3½	.....	65	.....	27,000	.....	50	.....	552	.....	1	.....
H. C. Frick Coke Co.	.....	Mammoth shaft.	.....	Shaft.	.....	Fan.	.....	Vulcan.	.....	9x5½	.....	55	.....	158,900	.....	163	.....	975	.....	2	.....
H. C. Frick Coke Co.	.....	Mammoth shaft.	.....	Slope.	.....	Fan.	.....	Vulcan.	.....	9x5½	.....	55	.....	45,140	.....	98	.....	461	.....	2	.....



Locality	Stratum	Drift	Furnace	5x3 1/2 x 13	17.75	88	202
Continental Coke Co.	Marguerite No. 1.	Slope	Fan.	11x11	42.00	85	494
Continental Coke Co.	Marguerite No. 2.	Drift	Natural.	6x6	7.80	39	263
H. C. Frick Coke Co.	Mutual No. 2.	Drift	Fan.	10x3 1/2	26.40	68	388
H. C. Frick Coke Co.	Mutual No. 3.	Drift	Natural.	6x6	6.05	30	202
H. C. Frick Coke Co.	Mutual No. 4.	Drift	Fan.	7x7	37.30	104	305
Pittsburgh Coal Co.	Ocean No. 1.	Drift	Fan.	12x	55.60	137	415
H. W. Shields	East Royal No. 1.	Drift	Fan.	6x16	41.40	137	415
Pittsburgh Coal Co.	Port Royal No. 2.	Drift	Fan.	8x5	34.80	60	616
Pittsburgh Coal Co.	Port Royal No. 3.	Drift	Fan.	10x3 1/2	57.20	37	465
Pennsylvania	Pennville	Drift	Fan.	10x3 1/2	57.20	37	465
Penn Gas Co.	Penn Gas No. 4.	Drift	Furnace.	12x2 1/2	21.50	92	632
Painter	Painter	Drift	Fan.	10x3 1/2	21.50	92	632
Rust	Rust	Slope	Fan.	12x2 1/2	21.50	92	632
South West No. 1.	South West No. 1.	Drift	Fan.	10x3 1/2	21.50	92	632
South West No. 2.	South West No. 2.	Drift	Fan.	10x3 1/2	21.50	92	632
South West No. 3.	South West No. 3.	Drift	Fan.	10x3 1/2	21.50	92	632
South West No. 4.	South West No. 4.	Drift	Fan.	10x3 1/2	21.50	92	632
Standard shaft.	Standard shaft.	Drift	Fan.	10x3 1/2	21.50	92	632
Shaner slope.	Shaner slope.	Slope	Fan.	10x3 1/2	21.50	92	632
Summit.	Summit.	Drift	Fan.	10x3 1/2	21.50	92	632
Scuttle.	Scuttle.	Drift	Natural.	12x3 1/2	44.30	63	700
Spring Grove.	Spring Grove.	Drift	Fan.	12x3 1/2	44.30	63	700
The T. P.	The T. P.	Drift	Natural.	12x3 1/2	44.30	63	700
United.	United.	Drift	Fan.	12x3 1/2	44.30	63	700
Valley.	Valley.	Drift	Fan.	12x3 1/2	44.30	63	700
White.	White.	Drift	Fan.	12x3 1/2	44.30	63	700
Waverly.	Waverly.	Drift	Fan.	12x3 1/2	44.30	63	700
Yough slope.	Yough slope.	Slope	Fan.	12x3 1/2	44.30	63	700



Locality	1890	75	214	14,030	62	225	
J. W. Shields, .....	16,080	75	214	14,030	62	225	
Pittsburg Coal Co., .....	16,800	60	280				
Pittsburg Coal Co., .....	17,550						
Port Royal No. 1, .....	13,200		354				
Pennsylvania Coal Co., .....	10,500	37	354				
Penn Gas Coal Co., .....	12,480	45	233	2,520	15	168	
H. C. Frick Coke Co., .....	14,985	52	230	11,760	2/3	158	
H. C. Frick Coke Co., .....	14,985	52	230	16,900	40	422	
H. C. Frick Coke Co., .....	14,985	52	230	16,900	30	300	
Ruff, .....	4,980	25	199	9,000			
S. W. No. 1, A., .....	19,540	55	361	11,700	60	195	
S. W. No. 2, B., .....	11,700	35	334	11,750	30	391	1/4
South West C. C. Co., .....	17,400	42	433	350	20	175	
South West C. C. Co., .....	10,425	60	173	9,750	40	254	
South West C. C. Co., .....	10,425	60	173	9,750	40	254	
South West C. C. Co., .....	4,000	15	266	16,240	70	232	
South West C. C. Co., .....	22,750	50	435	19,600	50	332	
Standard shaft, .....	No. 5			No. 6		No. 7	
Standard shaft, .....	11,200	40	251	11,268	40	282	
Standard shaft, .....	7,200	28	257	11,180	70	139	
Shaner slope, .....	12,750	115	111				
H. C. Frick Coke Co., .....	7,700	63	126				
Pittsburg Coal Co., .....	3,800	20	438	10,500	35	300	
H. C. Frick Coke Co., .....	3,800	20	438	10,500	35	300	
H. C. Frick Coke Co., .....	3,750	28	312				
American Sheet Steel Co., .....	9,540	33	289	9,000	18	111	
Tip Top, .....	15,500	55	32	7,425	2/2	166	11 1/2
United, .....	9,000	11	821	10,540	12	1,045	49
H. C. Frick Coke Co., .....	5,500	63	305	9,775	33	125	
H. C. Frick Coke Co., .....	9,900	55	180	9,700	47	206	
Waverly, .....	9,900	55	180	9,700	47	206	
Yough slope, .....	10,300	50	206	11,760	48	245	
Pittsburg Coal Co., .....							

Description of Accidents that Occurred in and About the Mines of  
the Eleventh Bituminous District for the Year 1901.

Standard shaft, January 14, Andrew Stelle, miner, fatally injured by mine cars; victim was employed with his father who sent him out in the dark to get his safety lamp lighted, and on his way down the heading, his foot became fast between a culvert plank and the track rail, the driver was descending the heading with a trip of loaded cars and did not hear the boy calling until so near that he was unable to stop until the wheels had passed over his foot. The accident was not considered very serious at the time but blood poisoning resulted, causing death nine days later.

Yough Slope, January 14, Joseph Zaranski, miner, killed instantly by an electric current; victim was riding down the grade on the rear end of the trip and upon reaching the end he got off to remove the sprags for the driver, when he came in contact with the electric wires, which were placed on the pillar a few inches apart and protected by a covering of boards two feet in width.

Rist mine, January 19, Isaac Chapman, driver, fatally injured by mine cars; victim was nearing the side track and in attempting to stop got off on the narrow instead of the wide side for the purpose of applying the brake, and was crushed between the cars and the pillar, death resulted a few hours later.

Valley mine, January 25, John Quinn, trip rider, killed instantly by mine cars; victim was about to start the trip from the side track and had given the engineer the signal and was either on the front car or was standing on the track in front of the same, the coupling between the first and second cars was not properly adjusted, and when the engines started to pull, the first car became detached running upon victim.

Standard shaft, January 29, Clarence Fox, driver, fatally injured by mine cars; victim was descending the heading with a trip of cars and upon nearing a trap door, ran ahead and opened the door and in attempting to get on the front car he fell when the cars ran upon him, inflicting injuries that caused death five hours later.

Marguerite mine No. 2, February 5, John Pettock, miner, fatally injured by a fall of horse back roof in stump workings. Victim had made a fall of roof and had started to cut across for a new face when an unseen pot of horseback fell and struck him, inflicting injuries which caused death two days later.

South West mine No. 4, February 14, Kasper Caperell, miner, fatally burned by the flame of powder and coal dust; victim was employed with his son; they had charged a blast and requested the driver (who had instructions to do so) to fire the same which he did, the room was in a distance of about thirty feet, and was near to an inlet air current and temperature being low, ice was formed near to



the place and the dust was very dry. The shot was placed too straight into the solid and was charged too heavily and blew out igniting the dust, the flame from which reached a distance of about fifty feet to the point where victim and his son were standing, burning them both; the son recovered, but the father was removed to the Connellsville Hospital where he died ten days later; explosive gas never was detected in this mine.

Bessemer mine No. 2, February 18, Charles Phisto, miner, killed instantly by a fall of roof. Victim was employed drawing a rib and while engaged drawing posts for the purpose of making a fall of roof it suddenly fell and with result as stated.

Calumet mine, February 18, Evan Harkin, driver, fatally injured by mine cars. Victim was coming out with a trip of loaded cars, and in attempting to pass by on the narrow side, was crushed between the cars and heading pillar; was removed to the Greensburg Hospital where he died.

Calumet mine, April 1, Peter Carshock, miner, fatally injured by a fall of roof. Victim was employed in drawing stumps, and while shoveling coal into a mine car, the roof fell suddenly, inflicting injuries which proved fatal four days later.

United mine, April 6, Stephen Barno, oven charger, fatally injured by being struck by the charging engine on the coke oven track, while attempting to cross a trestle in front of the engine. The engineer did not see him until after the engine had struck him, his injuries proved fatal two hours later.

Alverton mine No. 2, April 16, Frank Smith, miner, killed instantly by a fall of slate; victim was employed in company with Michael Prepyia, and after firing a blast, they went forward and began to dig at the coal, without first examining the roof when a piece of slate falling struck them both, killing the former, and injuring the latter who recovered.

South West mine No. 1, April 17, Joseph Bush, miner, killed instantly by a fall of slate. Victim was employed in drawing a rib and had made a fall of roof and was engaged cutting across for a new face, when a fall of slate struck him with result as stated.

Port Royal mine No. 2, June 10, list of fatalities resulting from the gas explosions of the above date:

John Peebles, roadman, Port Royal mine, body has not been recovered.

Anton Stickle, pipe hand, Port Royal mine, body recovered September 13.

Frank Davenport, roadman, Port Royal mine, body recovered September 13.

Jerry Daley, Port Royal mine, body recovered September 13.

Michael Roy, mine foreman, Euclid mine, body recovered September 11.



Dennis Wardley; mine foreman, Port Royal mine, body recovered September 11.

Samuel Hadley, assistant mine foreman, Port Royal mine No. 2, body recovered September 17.

Peter Marchonda, boss driver, Port Royal mine, body recovered September 11.

Taylor Gunsallus, Sr., laborer, Port Royal mine, body recovered June 11.

Taylor Gunsallus, Jr., roadman, Port Royal mine, body recovered September 11.

John Keck, mine foreman, Darr mine, body recovered September 11.

David James, machine runner, Port Royal mine, body recovered June 11.

John Conto, machine boss, Darr mine, body recovered September 11.

Barney Bald, coal loader, Waverly mine, body recovered September 17.

William Allison, assistant division mine superintendent, West Newton division, body recovered September 11.

William McCune, division mine superintendent, Port Royal division, body recovered June 11.

Fred. Krugar, roadman, Waverly mine, fatally injured, removed to McKeesport Hospital, where he died June 11.

H. E. Beveridge, coal loader, Port Royal mine, fatally injured, removed to McKeesport Hospital, where he died June 11.

Thomas Smith, mine foreman, Waverly mine, fatally injured, removed to McKeesport Hospital, where he died June 15.

Penn Gas mine No. 4, June 14, Louis Griffion, miner, fatally injured by a fall of coal and slate. Victim was employed drawing a rib; the place was crushed to some extent, and he had a small quantity of the face undermined and was engaged shoveling coal into a car when coal and slate fell striking him; he was removed to his home where he died in two hours.

Standard slope mine, John Bunetsky, miner, caught by a fall of slate; dead when removed. Victim was employed drawing a rib and had attempted to make a roof fall on the evening previous, but failing to get his posts all out, the fall was not complete so he procured the assistance of John McNelsky to hold the lights, and taking a small hatchet he entered under the roof and began to cut a post when suddenly the roof fell, and in attempting to retreat he fell or was thrown down alongside of the rib with his head toward the outside, the debris sliding forward covered him to a depth of about three feet, he called for help after being covered, and a number of the near by workmen assembled and endeavored to extricate him. They could

hear him breathing for about twenty minues, but life was extinct when he was removed; the body was examined by a physician who could find no broken bones and gave as his opinion that death was caused by suffocation.

Hecla mine No. 2, August 15, Parnick Wasil, miner, fatally injured by mine cars. Victim was assisting the driver to place a mine car upon the track, and was lifting upon the side of the car when the driver started the mule to pull; the car swung around suddenly and caught his head between the corner of car and an upright timber, inflicting injuries which caused death three days later.

Marguerite mine No. 2, September 27, John McKitty, miner, fatally injured by a fall of slate and roof coal. Victim was employed cutting off a corner preparatory to putting a hauling track through an angling cross-cut which had been driven through the chain pillar between two headings; at this point the slate had been blasted down on the heading and perhaps shattered over the side and as he neglected to place a post under, it fell striking him inflicting injuries which proved fatal five hours later.

Standard shaft mine, September 30, John Telemack, miner, killed instantly by a fall of roof; two men were engaged drawing the chain pillar between two butt headings, and were preparing to make a roof fall, and victim went to assist them and taking a pick to cut out a portion of the coal stump, when the roof falling suddenly caught him; it required a force of workmen several hours to recover the body.

Mutual mine No. 2, October 16, William Burkey, American, killed instantly by a fall of roof. Victim was employed drawing heading stumps in company with three other men; there were old posts standing in these openings, and when about to put up a post he observed the roof giving way, and when he attempted to run toward the outside he was caught by the fall; at these particular openings a very large horseback traversed the roof and could not be observed for the roof coal which was very perfect.

Osceola mine, October 21, Robert Smith, miner, fatally injured by a fall of slate. Victim was employed loading coal, and was shoveling coal from under a large quantity of slate which was supported by only one post; a portion of the slate fell knocked the post out, both post and slate striking him; the injuries proved fatal three hours later.

Calumet mine, October 25, Zepro Shaftzis, miner, fatally injured by a small fall of roof coal; victim was employed drawing entry stumps and went down the heading to assist the driver and roadman to place some empty cars upon the track, and got into the front car when a small portion of roof coal fell upon his back. He was taken to his home and on the fololwing morning was removed to the Greensburg Hospital, where he died on the evening of the same day.

Tip Top mine, October 26, Albert Shrinkle, killed instantly by a fall of roof. Victim was employed drawing a rib, and as no person was present at the time it is not known exactly how the same occurred, but as the place was in a manner ready for a roof fall, and as the body was found near the centre of the fall and a pick also, it appears probable that he was cutting at the coal stump which must have been very small. As he did not appear at the mine mouth at the close of the shift, the mine foreman went in search of him, and found his coat and dinner bucket, and as the place had fallen, he concluded that the victim must be under the fall; a force of workmen was started to clear the fall and it required several hours to recover the body.

Mammoth slope mine, November 2, Andrew Katmarchick, coke drawer, killed instantly by being run over by the larries on the coke oven track. Victim went upon top of the ovens to keep warm, and must have been sleeping upon the larry track for as the charging engine was making the first trip at 6 A. M., it being dark and foggy, he was not seen until his body was discovered.

Ruff mine, November 25, Andrew Stumpf, miner, killed instantly by a fall of roof coal and horseback. Victim was employed drawing heading stumps. He had just started the place; he had cleared the dirt out of this and placed two posts to support the roof, but a blind spar traversed the roof directly in line with the opening, forming a horseback in the roof which could not be observed on account of the coal remaining under the slate, and while cutting the coal from under it the posts fell upon him with result as stated.

Standard shaft mine, November 30, Michael Sirene, fatally injured by falling upon his dinner bucket. Victim was coming out of the mine by the traveling way and upon nearing the shaft bottom it is necessary to cross the same to travel down the wide side to the shaft; upon arriving at this point a trip was approaching and rushing to cross before it his foot struck the rail causing him to fall clear of the track, but striking upon his dinner bucket caused internal injuries, which proved fatal thirty-six hours later.

Mammoth slope mine, December 5, Martin Casper, miner, killed instantly by a fall of roof. Victim was employed drawing a rib and on the evening previous he had prepared the place for a roof fall, but did not draw the posts, perhaps hoping it would crush down during the night, but it did not. In the morning Casper attempted to cut some more from the coal stump and did not place any posts, and the roof falling suddenly caught him with result as stated.

#### Descriptive List of Mines and Improvements for the Year 1902.

Mines located on and near the Pittsburg Division of the Baltimore and Ohio Railroad:



Osceola.—Drift opening, Pittsburg low seam, ventilation and drainage satisfactory, except that the system of splitting the air current does not meet the requirements, but preparation is being made for an overcast which will correct this.

Big Chief.—Drift opening, Pittsburg low seam, drainage fair, but I have had cause to complain of the irregularity of ventilation; this mine is ventilated in connection with Guffey and Shaner slope mines, by one fan, and has been very unsatisfactory; a number of changes are being made in the system which will improve the conditions, but I fear they will not prove satisfactory until more power is added.

Guffey.—Drift opening, Pittsburg low seam, drainage fair, but ventilation similar to that of Big Chief. An electric motor main haulage has been installed, superceding the animals used formerly, and the change has proved very satisfactory.

Shaner Slope.—Slope opening, Pittsburg low seam, the drainage has been greatly improved during the year and is in very fair condition, but the ventilation is similar to that of Big Chief and Guffey. An electric motor main haulage has been installed during the year, which is giving general satisfaction.

Ocean No. 1.—Drift opening, Pittsburg low seam. Drainage fair, but ventilation unsatisfactory, notwithstanding that a new air shaft has been opened near the face of the workings, but on account of the number and location of doors the current has been irregular, but preparation is being made to erect overcasts and the changes will bring the mine up fully to the standard.

Ayers Hollow and Penn Gas No. 4, are directly connected and were ventilated by the combined power of an exhaust fan and furnace, both working on the return air current of both mines, and the ventilation was not at all satisfactory, and after consulting with the mine foreman, James H. Absalom, we decided to ventilate Ayers Hollow direct by the fan and Penn Gas No. 4, with the furnace, and I am pleased to state that on my last visit the condition of both mines was satisfactory, except the drainage in some portions of Penn Gas No. 4, where a surplus of water is encountered by drawing ribs and the elevation being uniform makes it difficult to drain.

Amyville.—Drift opening, Pittsburg low seam. The ribs and stumps of two old mines are being taken out at the one opening also some solid coal which had been left in a swamp on account of water which has been pumped out recently. During the month of November fire was started by the heat of the furnace, and no attempt was made to extinguish it for some time until it had gained headway in the old workings and reached the main heading where there is but small pillars on either side, and on account of breaks to the surface, it seems impossible to seal it air tight, and I fear it will be necessary to abandon the opening entirely, and gain an entrance to the coal by

another opening. The system of mining in former years, the ventilation and drainage have not been up to the standard of the requirements.

Yough Slope.—Slope opening, Pittsburg low seam. Ventilation and drainage satisfactory, but the means of egress does not meet the requirements, I have brought the matter before the coal company, and they have decided to open a new hoisting shaft to be equipped with modern appliances, and use the present slope for a traveling way, and when such improvements are completed it will place the mine in the list of the best in the State, as the present inside workings as well as the coal field are favorable for a first class mine.

Euclid.—Shaft opening, Pittsburg high seam, ventilation and drainage fair. A slight creep has developed in a portion of the mine which has caused the loss of a portion of two butt headings. A new shaft is being opened for the purpose of ventilation and drainage, which will add very much to the improvement of the mine.

Port Royal Nos. 1 and 2.—Shaft openings, Pittsburg high seam. These two mines are located as follows: No. 1 hoisting shaft on the east side of the Youghiogheny river, and on the line of the Baltimore and Ohio Railroad. No. 2 hoisting shaft, and also the ventilating shaft for both mines are located on the west side of the river, and they are directly connected by three tunnel entries passing under the river, also by several openings in the abandoned parts of the mines. In No. 2 mine some time prior to June 10, a creep or squeeze had developed between Nos. 21 and 25 butt entries, and adjacent to No. 5 face heading side track. On the morning of June 10, the mine was examined by Wm. Gleason, the regular fire boss, and no danger was reported, but a small quantity of explosive gas in two or three headings, at the faces, also the progress of the creep was reported, and danger boards placed at the entrances of Nos. 24 and 25 entries, in which places the creep prevailed, to prevent persons from entering the same. After an examination by mine foreman, Dennis Wardley, and assistant Samuel Hadley, the danger boards were removed and the mine was operated during the day as usual with open lights in all portions. Four persons namely, John Peebles, Anton Stickle, Frank Davenport and Jerry Daley, were set to work erecting cribs in No. 35 room off No. 21 butt entry, and adjacent to No. 5 face side track, to arrest the progress of the creep in that section, the material was taken in by way of a cross-cut between the side track and the room, which had been made at some previous time, perhaps for ventilation. The mine was operated throughout the day, the shift closing at 4 P. M.

Between 5 and 6 P. M., the same four persons re-entered the mine for the purpose of continuing the erection of the cribs, also two other



persons, machine runners, entered and went into the straight main headings to cut coal. At 6.15 P. M., an explosion occurred which alarmed those in charge of the machinery at the shaft top; the mine foreman, and other officials were notified and a rescuing party was formed and entered the mine, other persons arriving later also entered, until they numbered about twenty. When they reached the entrance of No. 20 butt entry they observed two lights approaching from the straight main headings, which proved to be the two machine runners, who said that they had felt a concussion, but thought it to be the result of a fall, and they continued to work until the air pressure was shut off, and upon coming to the crosscut they observed smoke and dust and concluded to come out. This proved to the exploring party, that beyond all doubt, the explosion occurred in the No. 25 face section, so pushing on in that direction they reached the cribs, and there they found the bodies of Anton Stickle, Frank Davenport and Jerry Daley, but on account of the density of the after damp, they were unable to remove them, and as three of their number became stupid from the effects of the damp, they were compelled to again retreat to the entrance of No. 20 entry, and those who were overcome by the damp were taken out by others of the party. When on their way out they were passed by some other persons who proceeded to join the party inside. Nothing further is known of what occurred inside until 10.15 P. M. when a second explosion occurred which resulted in the death of all who were in the mine except two, who were only a short distance from the bottom of No. 1 shaft, and three others who were rescued by a party a short time after, and removed to the McKeesport Hospital on the following morning, where two died on that date and the other one on June 15, thus increasing the death rate to nineteen. No further attempt was made to explore the mine on that night.

Inspector Callaghan, of the Ninth District, having received notice, arrived at the scene about 9 A. M., June 11, and forming an exploring party entered the mine, some of the party engaged in removing the bodies which were found on the main tunnel, and had removed that of Taylor Gunsallus, Sr., and were bearing that of Wm. McCune, when a third explosion occurred, about 10.30 A. M., the flame of which reached over and beyond some of the party, burning them slightly, the entire party retreated, leaving the body of McCune behind.

A short time after a party entered the mine and recovered the body of McCune. I had not received notice of the disaster, but seeing the account of it in a morning paper, I proceeded to the scene. A party was formed consisting of George Santmyer, superintendent of Washington Run mines; Charlton Dixon, Inspector of Mines, Pittsburg Coal Company; John W. Hindmarsh, now superintendent Port Royal

Division; Matthew Labon, formerly assistant mine foreman Port Royal No. 1 mine, and myself. We entered the mine and made an examination of the return air way and from the indications and realizing that two after explosions had occurred, we were satisfied that there was fire in the mine, and that beyond doubt the victims were all dead; we returned to the outside, and a conference was held at which it was decided to make no further attempt to explore the mine, but to place a watch to report any changes, but as it was known that there was still one body on the main tunnel, about 10 P. M., a party was formed which entered the mine and recovered it, which proved to be that of David James.

On the following date June 12, the coroner of Westmoreland county, held an inquest on the body of William McCune, and the jury rendered the following verdict: " We find that William McCune, came to his death by an explosion of gas in Port Royal mine No. 2, of the Pittsburg Coal Company, on June 10, while attempting to recover the bodies of four men who had been killed by a former explosion occurring about 6 P. M., of the same date, the second explosion was likely caused by the ignition of some inflammable material from the first explosion."

On the same date a consultation was held by the officials of the company, Inspector James Blick, of the Seventh District and my self, when the question of flooding the mine was considered, but it was decided to await further developments.

June 17, a conference was held by the officials of the coal company, and Inspectors Blick, Louttit, Callaghan and myself, at which it was decided to seal up all that part of the mine, in which it seemed probable that fire existed. This work was placed in charge of Charlton Dixon, Inspector, and Benjamin Ferredy, division superintendent of the Pittsburg Coal Company, until the bodies had all been recovered on September 17, except that of John Peebles, which thus far has not been recovered.

As the sealing up of the fire district in No. 2 mine had been completed and the company was desirous of reparing No. 1, mine preparatory to operating it, I summoned Inspector Callaghan, and on July 17, we inspected all stoppings in No. 2 mine which enclosed the fire district, also the general workings of No. 1 mine, after which we issued the following letter:

Connellsville, Pa., July 17.

Mr. John Hindmarsh, Superintendent of Mines, Pittsburg Coal Company, Smithton, Pa.:

Dear Sir: After making a careful inspection of your Port Royal Nos. 1 and 2 mines, we believe that with extra care you can continue operations in No. 1 mine.

It is expected that you will have two first class fire bosses ex-

amine the mine every day before the men enter it, and the stoppings in No. 2 mine are to be examined at least twice every day by some official, and that safety lamps be used in all places giving off explosive gas. We believe with such care exercised every day, that your mine is practically safe for men to work in.

(Signed)

BERNARD CALLAGHAN,  
Mine Inspector, Ninth District.

W. J. MOLLISON,  
Mine Inspector, Eleventh District.

But I requested that when the mine was repaired, that I should receive notice so that I could again inspect it before the miners commenced work.

Having received notice I again inspected No. 1 mine on July 24, and found the conditions such that I issued the following notice:

Scottdale, Pa., July 24, 1901.

Pittsburg Coal Company, Mr. J. W. Hindmarsh, Division Superintendent, Smithton, Pa.:

Dear Sir: After a thorough inspection of your Port Royal mine No. 1, I deem the same safe to work only with the use of locked safety lamps in all parts, except in the main inlet air current to the present hauling side track, to which point open lights may be used; hoping that this will prove satisfactory and that you will comply strictly with the same, I am,

Yours truly,

W. J. MOLLISON,  
Mine Inspector, Eleventh Bituminous District.

July 25, operations were resumed in No. 1 mine. August 23, by request accompanied by Superintendent Hindmarsh, and Mine Foreman Charles McKay, we made an examination of the conditions at the different stoppings enclosing the fire district of No. 2 mine, to decide upon the practicability of opening the same for the purpose of making an attempt to recover the bodies that were entombed, and after a consultation we decided that it would be reasonably safe, realizing that there would be a certain amount of risk to be taken regardless of the length of time it had remained closed, and on September 7 operations were suspended in No. 1 mine.

September 9, the stoppings were removed and the ventilation permitted to work on the entrance, and on September 10, the exploring party began their search for the bodies. September 11 the party reached the inner end of No. 20 butt entry and at the junction where the same intersects No. 5 face heading and near the end of the hauling side track, at which seven bodies were recovered, being those of

Dennis Wardley, John Keck, Michael Roy, William Allison, Peter Marchando, John Conto, and Taylor Gunsallus, Jr.

Upon receipt of notice I visited the mine on September 13, on which date three other bodies were recovered, being those of Frank Davenport, Anton Stickle and Jerry Daley, victims of the first explosion.

September 17, two other bodies were recovered, being those of Samuel Hadley and Barney Bald, thus completing the entire list, except the body of John Peebles, which thus far has not been recovered.

September 23, a conference was held by the officials of the coal company, Inspector Blick and myself, to determine whether or not it was practicable under the prevailing conditions to make further attempt to recover the body of John Peebles, and after hearing the statements of those in charge of the searching party, and considerable discussion, it was again decided to seal up that part of the mine, and endeavor to recover the body at some future time when the prospects might be more encouraging; soon after the work of sealing began.

October 9, I issued the following notice:

Scottdale, Pa., October 9, 1901.

Mr. John W. Hindmarsh, Superintendent of Mines, Pittsburg Coal Company, Smithton, Pa.:

Dear Sir: You will please not set any person to work in Port Royal mine No. 1 except for the purpose of repairs, until you have substantially sealed off all workings on the east side of main tunnel in No. 2 mine.

P. S.—And you will please not set any persons to work in No. 2 mine, except for the purpose of repairs, until it has been thoroughly inspected by myself or other inspectors, after having received due notice from you that it is in readiness to be operated, hoping that you will observe the same, I am

Yours truly,

W. J. MOLLISON,

Mine Inspector, Eleventh Bituminous District.

At Smithton, Pa., October 7, Coroner Wynn, of Westmoreland county held an inquest on the death of Frank Davenport, one of the victims of the first explosion, when the jury returned the following verdict: "We find that Frank Davenport, came to his death by an explosion of gas in Port Royal mine No. 2 of the Pittsburg Coal Company, in Rostraver township, on June 10, 1901. We find that the gas was likely given off from a creep or squeeze in that part of the mine where he was working that day, and the gas was likely ignited by the light of John Peebles, who was employed with deceased building a



crib. The responsibility for the explosion rests upon the mine foreman and his assistant, and we recommend that hereafter safety lamps be used in this mine, especially where gas is likely to be developed suddenly.

“C. A. WYNN,  
“Coroner.”

Jurors: Alex. Watkins, Jacob S. Morrow, Eli S. Sager, Thomas T. Frances, Joseph A. Smith, Lorenza H. Young.

October 15, having received notice that No. 1 mine was in readiness to be operated I inspected all stoppings along the enclosed district of No. 2 mine, and I issued the following inspection report, I consider Port Royal mine No. 1 safe to operate only with the use of locked safety lamps in all parts, except in the main inlet air current to the interior end of the present hauling side track, to which point open lights may be used, as heretofore instructed.

W. J. MOLLISON,  
Mine Inspector, Eleventh Bituminous District.

November 29, I inspected the workings of No. 1 mine and found them in reasonably fair condition for the number of persons employed, and I gave the following inspection report: “Ventilation fair, drainage satisfactory and at the close of this report No. 1 mine continue in operation with the use of safety lamps as stated. I am unable to make any statement as to the condition of these mines previous to June 10, as I never had visited them previous to that date.

In concluding my report of this lamentable disaster, I am unable to make a positive statement as to who was responsible for it. I have examined the mine as far as practicable, and have obtained all the information possible, and I am unable to state in which exact section of the mine, and under what circumstances the gas was ignited, and I consider that the discovery of the body of John Peebles (which thus far has not been accomplished) would be the only evidence which could assist in arriving at a satisfactory conclusion. It may rest upon the mine foreman as stated by the coroner’s jury, but if so, he was merely following the precedent established for many years in Port Royal as well as in many other mines in the Pittsburg seam. And as to when and where safety lamps should be used, there may be divided opinions, and also there may be very divided opinions as to whether or not explosive gas is likely to be carried through certain parts of mines, and as the conditions at mines very often change from one day to another, that in many cases it is difficult for the mine foreman to decide at what exact point it becomes absolutely necessary to change from the use of open lights to safety lamps, and I hope that this subject will receive the careful consideration of all persons interested, and that we may be able to define the line of safety so as



to avoid a repetition of the Port Royal disaster, or perhaps something worse.

Waverly.—Shaft opening, Pittsburg high seam, ventilation and drainage satisfactory. A new fan diameter sixteen feet, has replaced the old one formerly in use, which has greatly improved the ventilation.

Eureka.—Drift opening, Pittsburg high seam, ventilation and drainage satisfactory.

Spring Grove.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars, ventilation and drainage satisfactory.

Sterling No. 2.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars, ventilation satisfactory, drainage fair when the pumps are running regularly.

Jimtown.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars. Ventilation in some portions are not fully up to the requirements; drainage fair.

#### Mines on and Near the Mt. Pleasant Branches.

Rist.—Slope opening, Connellsville coking seam, ventilation and drainage satisfactory on all visits.

White.—Drift opening, Connellsville coking seam. On my first visit the ventilation was defective in some portions, and the air was so contaminated with black damp that it was almost impossible to keep a light, and the means of egress did not meet the requirements. I complained to those in charge, in reference to the condition, and I am pleased to state that it has been very much improved. On my last visit the mine was in fair condition.

Eagle.—Drift opening, Connellsville coking seam, retreating with pillars and stumps, has been exhausted and abandoned during the year, condition fair when visited.

Summit.—Drift opening, Connellsville coking seam, ventilation and drainage fair.

Franklin.—Drift opening, Connellsville coking seam, ventilation and drainage satisfactory.

Tip Top.—Drift opening, Connellsville coking seam. On my first visit the ventilation and also the drainage was defective, but since that time the location of the fan has been changed, and the ventilation as well as the drainage improved, and on my last visit the condition was satisfactory.

Scottdale.—Drift opening, Connellsville coking seam, ventilation and drainage satisfactory on all visits.

Dexter.—Drift opening, Connellsville coking seam. On my first visit the ventilation was very defective, and the air contaminated by black damp, which was produced in old abandoned workings,

which had been cut into. I notified the officials to correct the evil, and I recommended the erection of a small furnace, which has been completed and has made some improvement, but I fear that it will not give satisfactory results until a small shaft is opened in another part of the mine; drainage satisfactory.

Painter.—Drift opening, Connellsville coking seam, ventilation and drainage satisfactory on all visits except one, when a few persons were working in an entry where the ventilation did not meet the requirements.

Diamond.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars. The ventilation is somewhat irregular caused by several openings to the surface, but on each visit I have found it in a healthful condition, with drainage fair.

Buckeye.—Drift opening, Connellsville coking seam. On my first visit the ventilation was defective, also the means of egress was not fully up to the requirements, but an air shaft was being opened which has been completed which has improved the ventilation, also the means of egress have been improved and is in satisfactory condition, and on my last visit the ventilation was satisfactory with drainage fair.

Mullin.—Drift opening, Connellsville coking seam, the ventilation is not fully up to the requirements, the means of egress were also defective, but has been improved and is in fair condition; drainage fair.

Standard Slope.—Slope opening, Connellsville coking seam, the ventilation has been greatly improved during the year, but is not fully up to the requirements in all parts; drainage fair.

Standard Shaft.—Shaft opening, Connellsville coking seam, is ventilated in connection with the slope mine by the power of one fan, and notwithstanding that the fan was producing 189,700 cubic feet of air, in some parts the ventilation did not come up fully to the requirements, but the placing of another fan to assist in the ventilating of these two mines, and Mullin drift, is under consideration, which it is probable that it will remove the evil; the drainage is satisfactory.

Sunrise.—Drift opening, Connellsville coking seam; while the ventilation is somewhat irregular on account of several openings to the surface, yet on each visit it was in fair condition; drainage fair.

Bessemer No. 1.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars, ventilation and drainage fair on each visit.

Bessemer No. 2.—Drift opening, Connellsville coking seam; ventilation and drainage not fully up to the requirements in some parts.

South West No. 2.—Slope opening, Connellsville coking seam, ventilation and drainage fair.

South West No. 1A.—Shaft opening, Connellsville coking seam, ventilation and drainage satisfactory.

South West No. 1B.—Shaft opening, Connellsville coking seam; ventilation satisfactory.

Acme.—Shaft opening, Connellsville coking seam; ventilation fair; drainage requires improvement in some parts.

#### Mines on and Near the South West Branch, Pennsylvania Railroad.

Pennsville.—Drift opening, Connellsville coking seam; ventilation and drainage satisfactory.

Valley.—Drift opening, Connellsville coking seam. On my first visit the ventilation was defective in some parts; a new Brazil fan had been installed to ventilate the new parts of the mine, and the air currents had not yet been properly coursed. The fan which ventilated the old portion of the mine was placed inside of the mine, and I recommended its removal to the outside to a shaft near the mine entrance; the change has been completed and two overcasts built, and I am pleased to state that on my last visit the ventilation and drainage were perfectly satisfactory.

Enterprise.—Drift opening, Connellsville coking seam, retreating with stumps and pillars; although the ventilation is somewhat irregular caused by several openings to the surface I have found the mine in healthful condition, with drainage satisfactory.

Union.—Drift opening, Connellsville coking seam, ventilation and drainage fair.

South West No. 4.—Drift opening, Connellsville coking seam, ventilation satisfactory and drainage fair.

Alverton No. 1.—Slope opening, Connellsville coking seam; ventilation was fair, with drainage satisfactory.

Alverton No. 2.—Drift opening, Connellsville coking seam, on my former visit the ventilation was defective, but on my last visit the ventilation and drainage were fair.

Empire.—Drift opening, Connellsville coking seam; on my last visit ventilation and drainage fair.

South West No. 3.—Drift opening, Connellsville coking seam; ventilation and drainage satisfactory.

Ruff.—Drift opening, Connellsville coking seam, during the early part of the year ventilation and drainage were very defective, but on my last visit they were fair.

Central.—Slope opening, Connellsville coking seam; ventilation and drainage fair. A new slope is being opened, and a new tippie built, which when completed will place the mine with the best in the region.

#### Mines on and Near the Sewickley Branch of the South West Pennsylvania Railroad.

Boyer.—New drift opening, Connellsville coking seam. Located one mile northwest of Hecla; when visited the means of ventilation



had not yet been installed, and the ventilation required improvement in some parts; drainage satisfactory.

Hecla No. 1.—Shaft opening, Connellsville coking seam; ventilation and drainage satisfactory on all visits, a tender roof extends over a part of the mine, also a very wet soft bottom, which causes it to be difficult to keep the working places open when drawing ribs.

Hester.—Drift opening, Connellsville coking seam; during the fore part of the year the ventilation and also the means of egress did not comply fully with the law. I notified those in charge to improve the same, and on my last visit the mine was in satisfactory condition.

Mutual No. 4.—New drift opening, Connellsville coking seam, located one and one-half miles north of Hecla; on my visit the means of ventilation was just under course of construction, and the ventilation required improvement at some working faces; drainage satisfactory.

Calumet.—Shaft opening, Connellsville coking seam, a larger fan has been installed during the year, which has improved the ventilation. The drainage required improvement in some portions; this mine also has a very wet soft bottom, which causes considerable trouble in drawing ribs, and some have been lost by the upheaval of the bottom.

Mammoth Shaft and Slope.—Openings, Connellsville coking seam, ventilation and drainage fair. These mines also are somewhat affected with soft bottoms, and the slope especially has very heavy grades.

United.—Shaft opening, Connellsville coking seam; on my last visit the ventilation was fair. Preparation was being made to renew the foundation of the fan, which will permit of running it faster; the widening of the inlet was also under consideration, which if completed will make ample provision for ventilation. The drainage on one side of the mine is excellent, but on the other, the elevation is very irregular and the drainage requires improvement.

Clare.—New drift opening, Connellsville coking seam; does not yet come under the provisions of the law.

Hecla No. 2.—Shaft opening, Connellsville coking seam; ventilation requires improvement, especially in reference to the system of splitting the air currents; drainage fair. A very soft dangerous roof extends over a great part of the mine, which causes extra expense to timber the headings, and also adds to the dangers in the working thereof.

Mutual No. 2.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars. Ventilation does not fully meet the requirements of law.

Mutual No. 3.—Drift opening, Connellsville coking seam; ventilation and drainage satisfactory.

Humphrey.—Drift opening, Connellsville coking seam. A mine fire was in progress in the early part of the year, the origin of which was described by Inspector C. B. Ross, of the Second Bituminous District in his annual report for 1900, and in continuance thereof I will state that the fire district remained sealed up until August, when it was opened up and by all indications the fire was extinguished. The mine was explored as far as possible, and at the entrance to the old abandoned workings which could not be penetrated, a stopping was built and a thermometer placed on the inside of it, and a record of the temperature was kept which ranged from sixty-six degrees to seventy-two degrees, which seems to remove all fear of further danger.

Marguerite No. 1.—Drift opening, Connellsville coking seam, retreating with ribs, stumps and pillars. Ventilation has not been fully up to the requirements of the law, yet it has been in very healthful condition, with drainage fair.

Marguerite No. 2.—Slope opening, Connellsville coking seam; in the early part of the year the ventilation was somewhat defective, but on my last visit a new Capell fan eleven feet in diameter was in operation, but on account of the heating of the new engine could not be run up to a reasonable capacity, and the ventilation was still below the requirements at some working faces, but I am satisfied that when the fan is in proper working order, it will furnish ample means, and if the air is conducted to the faces there will be adequate ventilation; drainage fair.

Emma and Home.—Drift openings, Connellsville coking seam; did not come under the requirements of the law, but were in fair condition when visited.



TABLE I—Showing Names of Operators, Railroads, etc., and Location of Collieries in the Eleventh Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
<b>H. C. Frick Coke Co.</b>						
Alverton No. 1	Westmoreland	O. W. Kennedy	Scottdale	Robert Depriest	Alverton	S. W. P. R. R.
Alverton No. 2	Westmoreland	O. W. Kennedy	Scottdale	Robert Depriest	Alverton	S. W. P. R. R.
Buckeye Nos. 1 and 2	Westmoreland	O. W. Kennedy	Scottdale	James Devlin	Mt. Pleasant	S. W. P. R. R.
Calumet	Westmoreland	O. W. Kennedy	Scottdale	J. M. Whitlaw	Stauffer	S. W. P. R. R.
Central	Westmoreland	O. W. Kennedy	Scottdale	John Stevenson	Mammoth	S. W. P. R. R.
Diamond	Fayette	O. W. Kennedy	Scottdale	Robert Ramsay	Ferce	S. W. P. R. R.
Enterprise	Westmoreland	O. W. Kennedy	Scottdale	Andrew Neish	Scottdale	Mt. Pleasant Branch B. & O. R. R.
Jimtown	Fayette	O. W. Kennedy	Scottdale	J. M. White	Alverton	S. W. P. R. R.
Mutual No. 2	Westmoreland	O. W. Kennedy	Scottdale	E. R. Laughrey	Dayton	Baltimore and Ohio Railroad.
Mutual No. 3	Westmoreland	O. W. Kennedy	Scottdale	E. R. Laughrey	United	S. W. P. R. R.
Mutual No. 4	Westmoreland	O. W. Kennedy	Scottdale	E. R. Laughrey	United	S. W. P. R. R.
Mammoth shaft	Westmoreland	O. W. Kennedy	Scottdale	John Stevenson	Mammoth	S. W. P. R. R.
Mammoth slope	Westmoreland	O. W. Kennedy	Scottdale	John Stevenson	Mammoth	S. W. P. R. R.
Mullin	Westmoreland	O. W. Kennedy	Scottdale	J. M. Whitlaw	Stauffer	Mt. Pleasant Branch B. & O. R. R.
Pistier	Fayette	O. W. Kennedy	Scottdale	D. B. Stauff	Scottdale	Mt. Pleasant Branch B. & O. R. R.
Ruff	Westmoreland	O. W. Kennedy	Scottdale	W. C. Mullin	Broad Ford	Mt. Pleasant Branch B. & O. R. R.
Standard shaft	Westmoreland	O. W. Kennedy	Scottdale	Robert Ramsay	Ferce	S. W. P. R. R.
Standard slope	Westmoreland	O. W. Kennedy	Scottdale	James S. Mack	Mt. Pleasant	S. W. P. R. R. and B. & O. R. R.
Sunrise	Westmoreland	O. W. Kennedy	Scottdale	James Devlin	Mt. Pleasant	S. W. P. R. R.
Summit	Fayette	O. W. Kennedy	Scottdale	James Mullin	Broad Ford	Mt. Pleasant Branch B. & O. R. R.
Tip Top	Westmoreland	O. W. Kennedy	Scottdale	James Loughrey	Scottdale	S. W. P. R. R.
United	Fayette	O. W. Kennedy	Scottdale	James Loughrey	Scottdale	S. W. P. R. R.
Valley	Fayette	O. W. Kennedy	Scottdale	W. C. Mullin	Broad Ford	Mt. Pleasant Branch B. & O. R. R.
White	Fayette	O. W. Kennedy	Scottdale	W. C. Mullin	Broad Ford	Mt. Pleasant Branch B. & O. R. R.
<b>Pittsburg Coal Co.</b>						
Big Chief	Westmoreland	Geo. W. Schluederberg	Pittsburg	Walter Calverly	Scott Haven	Baltimore and Ohio Railroad.
Buella	Westmoreland	Geo. W. Schluederberg	Pittsburg	J. W. Hindmarsh	Fitzhenry	Baltimore and Ohio Railroad.
Guffey	Westmoreland	Geo. W. Schluederberg	Pittsburg	Walter Calverly	Scott Haven	Baltimore and Ohio Railroad.
Ocean No. 1	Westmoreland	Geo. W. Schluederberg	Pittsburg	Walter Calverly	Scott Haven	Baltimore and Ohio Railroad.
Port Royal No. 1	Westmoreland	Geo. W. Schluederberg	Pittsburg	J. W. Hindmarsh	Fitzhenry	Baltimore and Ohio Railroad.
Port Royal No. 2	Westmoreland	Geo. W. Schluederberg	Pittsburg	J. W. Hindmarsh	Fitzhenry	P. & L. E. R.
Shaner slope	Westmoreland	Geo. W. Schluederberg	Pittsburg	Walter Calverly	Scott Haven	Baltimore and Ohio Railroad.
Waverly	Westmoreland	Geo. W. Schluederberg	Pittsburg	Walter Calverly	Scott Haven	Baltimore and Ohio Railroad.
Yough slope	Westmoreland	Geo. W. Schluederberg	Pittsburg	J. W. Hindmarsh	Fitzhenry	Baltimore and Ohio Railroad.

TABLE I—Continued.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Southwest Connellsville Coke Co.						
South West No. 1, A. . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	Wm. Ramsay, . .	Mt. Pleasant, . .	S. W. P. R. R.
South West No. 1, B. . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	Wm. Ramsay, . .	Mt. Pleasant, . .	S. W. P. R. R.
South West No. 2, . . . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	Wm. Q. Finch, . .	Mt. Pleasant, . .	S. W. P. R. R.
South West No. 3, . . . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	W. O. Cowan, . .	Alverton, . . . .	S. W. P. R. R.
South West No. 4, . . . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	W. O. Cowan, . .	Alverton, . . . .	S. W. P. R. R.
Continental Coke Co.						
Marguerite No. 1, . . . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	A. H. Pollins, . .	Pleasant Unity	S. W. P. R. R.
Marguerite No. 2, . . . .	Westmoreland, . .	O. W. Kennedy, . . . .	Scottdale, . . . .	A. H. Pollins, . .	Pleasant Unity	S. W. P. R. R.
Hecla Coke Co.						
Hecla No. 1, . . . . .	Westmoreland, . .	Thos. Laird, . . . . .	South West, . .	Thos. Laird, . . .	South West, . .	S. W. P. R. R.
Hecla No. 2, . . . . .	Westmoreland, . .	Thos. Laird, . . . . .	South West, . .	Thos. Laird, . . .	South West, . .	S. W. P. R. R.
Bessemer Coke Co.						
Empire, . . . . .	Westmoreland, . .	R. L. Martin, . . . . .	Pittsburg, . . . .	R. L. Martin, Jr., .	Bradenville, . .	S. W. P. R. R.
Humphrey, . . . . .	Westmoreland, . .	R. L. Martin, . . . . .	Pittsburg, . . . .	G. K. McGunagle, .	Humphrey, . . .	S. W. P. R. R.
W. J. Rainey.						
Acme, . . . . .	Westmoreland, . .	T. J. Mitchell, . . . .	Connellsville, . .	Hugh Ross, . . . .	Mt. Pleasant, . .	S. W. P. R. R.
Union, . . . . .	Westmoreland, . .	T. J. Mitchell, . . . .	Connellsville, . .	Wm. Duncan, . .	Alverton, . . . .	S. W. P. R. R.
Painter & Fogg.						
Clare, . . . . .	Westmoreland, . .	C. H. Fogg, . . . . .	Greensburg, . . .	W. M. Hart, . . .	Armbrust, . . .	S. W. P. R. R.
Hester, . . . . .	Westmoreland, . .	C. H. Fogg, . . . . .	Greensburg, . . .	W. M. Hart, . . .	Armbrust, . . .	S. W. P. R. R.
Penn Gas Coal Co.						
Ayers Hollow, . . . . .	Westmoreland, . .	T. Frank Wolf, . . . .	Irwin, . . . . .	E. V. Williams, . .	Irwin, . . . . .	Baltimore and Ohio Railroad.
Penn Gas No. 4, . . . . .	Westmoreland, . .	T. Frank Wolf, . . . .	Irwin, . . . . .	E. V. Williams, . .	Irwin, . . . . .	Baltimore and Ohio Railroad.
Cochran Bros.						
Spring Grove, . . . . .	Fayette, . . . . .	W. H. Cochran, . . . .	Dawson, . . . . .	W. H. Cochran, . .	Dawson, . . . . .	Baltimore and Ohio Railroad.
Laughlin & Co.						
Tyrone, . . . . .	Fayette, . . . . .	C. Wharton, . . . . .	Summit Mines, . .	C. Wharton, . . . .	Summit Mines, . .	Baltimore and Ohio Railroad.
B. F. Keister & Co.						
Franklin, . . . . .	Fayette, . . . . .	E. F. Keister, . . . . .	Summit Mines, . .	B. F. Keister, . . .	Summit Mines, . .	Mt Pleasant Branch B. & O. R. R.

Pennsville Coke Co.	Fayette, .....	J. D. Sherrick, .....	Pennsville, ....	J. D. Sherrick, ..	Pennsville, ..	S. W. P. R. R.
American Sheet Steel Co.	Fayette, .....	Robert Skemp, .....	Scottdale, .....	Robert Skemp, ..	Scottdale, ...	Mt Pleasant Branch B. & O. R. R.
Scottdale, .....	Fayette, .....	J. R. Stauffer, .....	Scottdale, .....	J. R. Stauffer, ..	Scottdale, ...	Mt. Pleasant Branch B. & O. R. R.
J. R. Stauffer & Co.	Fayette, .....	— Wilson, .....	Greensburg, ...	John Sterling, ..	South West, ..	S. W. P. R. R.
Dexter, .....	Westmoreland, ..	J. W. Shields, .....	Pbg., L. B. 502.	Henry Jones, ...	Emblem, ....	Baltimore and Ohio Railroad.
Mt. Pleasant Coke Co.	Allegheny, .....	Samuel Bowman, ....	McKeesport, ...	Sam'l Bowman,	McKeesport, ..	Second Avenue Traction Line.
Boyer, .....	Allegheny, .....	R. B. Macintosh, ....	Pittsburg, .....	J. B. Stone, .....	Suter, .....	Baltimore and Ohio Railroad.
J. W. Shields.	Westmoreland, ..	J. W. Overholt, .....	Scottdale, .....	J. W. Overholt,	Scottdale, ...	S. W. P. R. R.
Oscola, .....	Westmoreland, ..					
Bowman Bros.						
Bowman, .....						
Amyville Gas Coal Co.						
Amyville, .....						
J. W. Overholt.						
Emma, .....						

TABLE II.—Gives the total number of tons of coal mined and tons of coke produced in each colliery, number of days worked, number of employees, number of persons killed and injured, number of kegs of powder, etc., used in the Eleventh Bituminous District for the year ending December 31, 1901.

Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
H. C. Frick Coke Co.														
Alverton No. 1.	Westmoreland.	.....	1,258	1,379	171,675	112,692	252	293	261	.....	3	.....	.....	24
Alverton No. 2.	Westmoreland.	.....	264	407	67,533	44,841	104	270	93	.....	1	.....	.....	18
Bessemer Nos. 1 and 2.	Westmoreland.	.....	707	777	108,898	71,737	164	301	153	1	2	144	2,160	25
Buckeye.	Westmoreland.	.....	4,286	1,046	204,229	132,769	306	294	313	.....	4	.....	259	40
Calumet.	Westmoreland.	194	4,152	2,366	201,439	129,191	260	301	315	3	.....	.....	.....	29
Central.	Westmoreland.	.....	6,945	2,833	178,666	115,517	202	309	235	.....	1	.....	315	40
Diamond.	Fayette.	.....	.....	239	43,591	28,101	66	597	57	.....	.....	120	600	12
Enterprise.	Westmoreland.	.....	30	199	28,700	21,000	51	290	177	.....	1	.....	.....	17
Jefferson.	Westmoreland.	.....	2,466	2,192	185,265	117,068	291	290	63	1	2	1,720	.....	23
Mammoth shaft.	Westmoreland.	.....	1,651	1,497	114,539	.....	97	290	100	.....	.....	.....	.....	12
Mullin.	Westmoreland.	.....	.....	.....	65,559	42,805	100	282	44	.....	.....	.....	.....	4
Mammoth shaft.	Westmoreland.	.....	8,802	1,332	242,095	154,697	306	304	386	.....	2	.....	.....	52
Mullin.	Westmoreland.	.....	5,869	921	161,398	103,072	204	304	183	2	.....	.....	.....	34
Painter.	Westmoreland.	.....	1,187	703	43,515	26,442	82	217	82	.....	.....	.....	.....	10
Rist.	Fayette.	.....	990	1,127	153,652	100,628	228	293	228	.....	2	480	2,400	25
Rist.	Fayette.	.....	3,672	3,672	290,468	189,173	446	302	348	1	.....	2,315	50	42
Rist.	Westmoreland.	.....	1,540	.....	70,790	57,908	101	309	117	1	.....	.....	.....	4
Standard shaft.	Westmoreland.	.....	8,500	5,847	594,806	384,178	735	301	903	4	.....	185	.....	81
Standard shaft.	Westmoreland.	.....	1,604	.....	138,569	91,310	166	279	189	1	.....	.....	.....	13
Sunrise.	Westmoreland.	.....	.....	518	72,539	47,825	109	301	100	.....	.....	48	1,440	9
Sunrise.	Fayette.	.....	122	1,953	115,963	75,676	142	304	106	.....	.....	614	100	22
T. P.	Fayette.	.....	1,428	1,692	287,993	185,391	350	302	300	1	.....	2	200	38
United.	Westmoreland.	.....	4,493	1,692	287,993	185,391	350	302	300	1	.....	2	200	38
Valley.	Fayette.	.....	1,493	1,456	202,920	144,926	251	282	238	1	.....	2,100	100	24
White.	Fayette.	.....	304	2,883	147,524	96,225	200	302	185	.....	.....	1,040	.....	33
Total and average.		186,777	59,802	32,837	4,023,244	2,224,213	5,217	284.24	5,535	18	21	9,214	7,800	658



Pittsburg Coal Co.		97,352	273	105	37,730	.....	137	103	.....	1	400	.....	5
Big Chief,	Westmoreland,	112,811	3,210	256	121,135	3,404	25	141	.....	4	300	.....	13
Euclid,	Westmoreland,	156,692	1,825	269	158,756	.....	212 2	138	.....	6	275	.....	14
Eureka,	Westmoreland,	88,880	8,753	2	88,882	.....	200 7	142	.....	1	464	.....	11
Guffey,	Westmoreland,	124,805	8,753	1,448	135,011	.....	228 9	109	.....	2	456	.....	13
Ocean No. 1,	Westmoreland,	41,354	6,202	708	43,361	13,241	61	113	.....	1	715	.....	8
Port Royal No. 1,	Westmoreland,	41,354	.....	.....	43,361	.....	188 8	113	19	.....	.....	.....	8
Port Royal No. 2,	Westmoreland,	92,844	3,510	307	96,638	.....	190 3	113	.....	1	456	.....	10
Shaner slope,	Westmoreland,	84,506	2,757	309	82,799	3,332	62	138 7	.....	1	300	.....	10
Waverly,	Westmoreland,	100,880	2,612	.....	103,492	.....	181 3	117	1	2	150	.....	9
Young slope,	Westmoreland,	944,568	29,177 *	3,444	1,007,888	13,977	148	175 25	1,254	20	19	3,226	101
Total and average,													
S. W. C. C. Co.													
South West No. 1, A,	Westmoreland,	.....	11,607	6,361	411,163	262,476	417	310	495	1	.....	.....	37
South West No. 1, B,	Westmoreland,	.....	5,804	3,181	215,842	131,238	208	310	247	.....	3	.....	18
South West No. 2,	Westmoreland,	.....	2,176	3,358	246,163	160,419	252	311	282	.....	2	.....	40
South West No. 3,	Westmoreland,	38,073	4,358	3,147	237,932	138,236	205	310	245	.....	.....	.....	24
South West No. 4,	Westmoreland,	.....	421	1,801	139,744	91,681	151	310	184	1	1	.....	17
Total and average,		38,073	24,366	17,848	1,241,364	774,050	1,233	310 2	1,456	2	6	.....	136
Hecla Coke Co.													
Hecla No. 1,	Westmoreland,	.....	6,366	1,596	213,622	151,631	272	284 5	252	.....	.....	300	37
Hecla No. 2,	Westmoreland,	.....	6,010	3,694	403,290	285,966	500	287	487	1	.....	250	62
Total and average,		.....	12,376	5,290	616,912	437,597	772	285 75	739	1	.....	550	99
Continental Coke Co.													
Marguerite No. 1,	Westmoreland,	.....	1,333	1,353	112,851	73,443	133	308	143	1	.....	.....	14
Marguerite No. 2,	Westmoreland,	.....	2,667	2,707	225,701	146,885	267	308	288	1	1	.....	27
Total and average,		.....	4,000	4,060	338,552	220,328	400	308	431	2	1	.....	41
Bessemer Coke Co.													
Empire,	Westmoreland,	.....	500	100	124,000	59,464	120	247	124	.....	125	.....	12
Humphrey,	Westmoreland,	.....	1,876	600	73,485	50,611	100	263	125	.....	1	120 225	14
Total and average,		.....	1,876	700	197,485	110,125	220	255	249	.....	1	245	26
W. J. Rainey.													
Acme,	Westmoreland,	.....	1,898	480	149,159	97,854	200	310	178	.....	.....	30	14
Union,	Westmoreland,	.....	80	210	28,075	18,523	70	243	46	.....	11	125	8
Total and average,		.....	1,978	690	177,234	116,377	270	276 5	22 4	.....	11	155	22
Painter & Fogg.													
Clare,	Westmoreland,	.....	30	.....	1,452	1,075	50	55	18	.....	.....	.....	2
Hester,	Westmoreland,	.....	156	.....	70,720	15,550	50	209	44	.....	.....	.....	4
Total and average,		.....	186	.....	22,172	16,625	100	132	62	.....	.....	.....	6



TABLE II—Continued.

Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employees—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Penn Gas Coal Co.	Westmoreland, ..	43,537	324	239	44,820	.....	.....	182.5	54	.....	1	.....	.....	5
Ayers Hollow, ..	Westmoreland, ..	43,596	324	239	44,819	.....	.....	182.5	54	1	1	.....	.....	4
Penn Gas No. 4, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total and average, ..	.....	87,193	1,848	598	89,639	.....	.....	182.5	108	1	2	.....	.....	9
Cochran Bros.	Fayette, ..	.....	180	320	39,119	29,196	50	298	59	.....	.....	150	.....	3
Spring Grove, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laughlin & Co., Ltd.	Fayette, ..	.....	192	193	9,534	6,176	.....	89	22	.....	.....	.....	.....	4
Tyrone, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
B. F. Keister & Co.	Fayette, ..	12,430	152	225	31,628	22,425	50	305	40	.....	1	.....	.....	5
Franklin, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsville Coke Co.	Fayette, ..	.....	1,144	547	57,008	42,705	92	282	79	.....	.....	340	.....	4
Pennsville, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
American Sheet Steel Co.	Fayette, ..	.....	.....	.....	36,888	.....	.....	300	27	.....	1	.....	.....	9
Scottdale, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. R. Stauffer & Co.	Fayette, ..	.....	.....	202	20,049	15,324	40	250	24	.....	.....	4	47	4
Dexter, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Pleasant Coke Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boyer, ..	Westmoreland, ..	.....	120	200	13,433	8,742	120	45	130	.....	.....	.....	.....	10

J. W. Shields.	Osceola, .....	Allegheny, .....	161,222	2,181	.....	163,303	.....	.....	305	198	1	.....	575	.....	11
Bowman, .....	Bowman Bros. ....	Allegheny, .....	.....	.....	16,800	16,800	.....	.....	299	30	.....	.....	.....	.....	3
R. B. Macintosh.	Amyville, .....	Westmoreland, ..	46,184	.....	1,253	47,437	.....	.....	225	70	.....	1	25	.....	5
J. W. Overholt.	Emma, .....	Westmoreland, ..	.....	.....	346	22,954	16,709	298	36	18	.....	.....	.....	.....	9
Grand total and average, ..	.....	.....	1,476,447	139,519	85,553	8,172,143	4,360,569	8,778	245.27	10,755	45	53	13,790	8,783	1,165

TABLE II—Continued.

Names of Operators.	County.	Number of Boilers.			Total horse power.	Locomotives.			Number steam engines of all classes.	Total horse power.	Number pumps delivering water to surface.	Capacity in gallons per minute.	Quantity delivered to surface per minute—gallons.	Number electric dynamos.	Number air compressors.
		Number of Boilers.				Locomotives.									
		Cylindrical.	Horse power.	Tubular.		Horse power.	Steam.	Air.							
H. C. Frick Coke Co., .....	West'd & Fay., .....	53	2,145	52	4,204	6,209	15	2	63	5,136	23	16,085	7,041	5	8
Pittsburg Coal Co., .....	Westmoreland, ..	14	474	21	2,695	3,169	5	1	35	3,168	10	3,306	2,746	10	3
S. W. C. C. Co., .....	Westmoreland, ..	15	392	12	702	1,094	5	4	10	2,039	7	9,778	9,737	1	2
Hecia Coke Co., .....	Westmoreland, ..	4	100	8	920	1,020	1	.....	5	410	8	7,000	2,709	.....	.....
Continental Coke Co., .....	Westmoreland, ..	.....	.....	4	250	1	.....	.....	.....	85	2	300	220	.....	1
Bessemer Coke Co., .....	Westmoreland, ..	.....	.....	4	405	105	.....	.....	5	155	1	236	180	.....	.....
W. J. Rainey, .....	Westmoreland, ..	.....	.....	4	330	330	1	.....	3	225	1	940	122	.....	1
Painter & Fogg, .....	Westmoreland, ..	.....	.....	2	105	105	.....	.....	.....	.....	.....	.....	.....	.....	.....
Penn Gas Coal Co., .....	Westmoreland, ..	2	44	4	192	236	.....	.....	3	225	1	243	20	.....	.....
Cochran Bros., .....	Fayette, .....	1	25	1	50	75	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laughlin & Co., Ltd., .....	Fayette, .....	1	42	1	48	90	.....	.....	3	45	.....	.....	.....	.....	.....
B. F. Kelster & Co., .....	Fayette, .....	.....	.....	1	10	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coke Co., .....	Fayette, .....	.....	.....	2	60	140	1	.....	2	45	2	640	500	.....	.....
American Sheet Steel Co., .....	Fayette, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. R. Stauffer Co., .....	Fayette, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mt. Pleasant Coke Co., .....	Westmoreland, ..	.....	.....	1	30	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allegany, .....	.....	.....	.....	2	300	700	.....	.....	5	800	1	200	20	1	.....
Bowman Bros., .....	Westmoreland, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
R. B. MacIntosh, .....	Westmoreland, ..	1	70	.....	70	.....	.....	.....	.....	.....	1	450	450	.....	.....
J. W. Overholt, .....	Westmoreland, ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total, .....	.....	107	3,750	119	10,021	13,633	23	3	136	12,173	65	39,172	23,736	17	15

TABLE III—Showing the number of each class of employees at each colliery in the Eleventh Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside and outside.		
		Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.									
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employees.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	Slate pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.		All other employees.	Total outside.
H. C. Frick Coke Co.																		
Alvorton No. 1, .....	Westmoreland, ..	1	1	113	7	13	3	6	142	2	3	23	108	108	2	2	118	251
Alvorton No. 2, .....	Westmoreland, ..	1	1	43	8	8	1	2	55	1	1	2	36	36	1	1	58	91
Bessemer Nos 1 and 2, ..	Westmoreland, ..	1	1	60	3	16	3	15	78	1	2	2	69	69	3	3	75	133
Buckeye, .....	Westmoreland, ..	1	2	127	18	18	2	16	166	1	3	5	103	103	8	8	147	283
Calumet, .....	Westmoreland, ..	1	2	155	41	18	1	15	194	1	4	7	107	107	1	1	121	313
Central, .....	Westmoreland, ..	1	2	120	5	12	5	15	160	1	1	1	61	61	2	2	75	235
Diamond, .....	Payette, .....	1	1	20	2	3	3	1	27	1	1	1	35	35	2	2	38	65
Enterprise, .....	Westmoreland, ..	1	1	22	2	4	4	1	29	1	1	5	20	20	1	1	22	51
Intown, .....	Payette, .....	1	1	70	8	9	1	8	97	1	2	5	70	70	2	2	80	177
Mutual No. 1, .....	Westmoreland, ..	1	1	51	2	7	2	5	61	1	1	3	42	42	1	1	63	109
Mutual No. 2, .....	Westmoreland, ..	1	1	39	2	2	2	5	50	1	2	3	3	3	3	3	56	106
Mutual No. 3, .....	Westmoreland, ..	1	1	33	2	2	2	5	38	1	6	7	130	130	1	1	146	386
Mutual No. 4, .....	Westmoreland, ..	1	3	132	12	22	4	6	240	1	2	3	7	7	2	2	37	383
Mammoth shaft, .....	Westmoreland, ..	1	1	95	5	10	1	3	116	1	1	3	29	29	3	3	37	82
Mammoth slope, .....	Westmoreland, ..	1	1	37	2	4	4	1	45	1	1	3	125	125	3	3	133	233
Mullin, .....	Westmoreland, ..	1	1	37	6	9	1	6	55	2	7	5	167	167	1	1	183	348
Painter, .....	Payette, .....	1	1	75	6	18	1	2	165	2	7	3	51	51	4	4	54	117
Rust, .....	Payette, .....	1	1	132	6	18	1	6	165	2	7	3	51	51	4	4	54	117
Standard shaft, .....	Westmoreland, ..	1	1	55	1	4	4	2	63	1	11	12	360	360	1	1	372	903
Standard slope, .....	Westmoreland, ..	2	4	400	50	42	9	4	511	4	11	12	1	1	38	43	43	189
Sunrise, .....	Westmoreland, ..	1	1	125	5	11	2	1	146	1	2	3	46	46	1	1	49	190
Summit, .....	Westmoreland, ..	1	1	40	4	5	1	1	51	1	1	1	47	47	2	2	52	105
Fayette, .....	Payette, .....	1	1	40	3	9	1	1	53	1	1	1	47	47	2	2	52	105

TABLE III.—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.										Occupations of Persons Employed Outside.							Grand total inside and outside.
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.		
Fayette, .....	Fayette, .....	1	1	55	2	8	8	.....	66	1	1	.....	.....	43	.....	.....	45	111	
United, .....	Westmoreland, ..	1	2	176	22	15	15	7	238	1	4	8	.....	137	2	.....	152	390	
Valley, .....	Fayette, .....	1	1	101	5	13	6	.....	127	1	3	4	.....	100	3	.....	111	238	
White, .....	Fayette, .....	1	.....	80	5	11	.....	2	99	1	2	1	.....	80	2	.....	86	185	
Total and average, .....	.....	27	19	2,456	183	233	49	96	3,113	26	70	82	1	2,095	44	4	2,322	5,435	
Pittsburg Coal Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Big Chief, .....	Westmoreland, ..	1	1	75	2	8	1	3	91	1	2	1	.....	5	1	7	17	108	
Euclid, .....	Westmoreland, ..	1	2	95	1	9	2	13	123	.....	.....	3	.....	.....	.....	6	13	136	
Eureka, .....	Westmoreland, ..	1	.....	100	.....	11	4	5	121	.....	2	.....	.....	.....	1	11	17	108	
Guffey, .....	Westmoreland, ..	1	1	75	2	10	5	17	122	1	2	.....	.....	.....	1	11	17	102	
Ocean No. 1, .....	Westmoreland, ..	1	1	90	4	14	2	10	122	1	4	.....	.....	.....	1	13	27	140	
Port Royal No. 1, .....	Westmoreland, ..	1	2	70	2	6	1	12	94	.....	3	5	.....	15	1	10	35	120	
Port Royal No. 2, .....	Westmoreland, ..	1	1	80	3	8	1	8	101	.....	.....	.....	.....	.....	.....	6	11	112	
Shaner slope, .....	Westmoreland, ..	1	1	90	.....	8	3	9	115	1	.....	.....	.....	.....	1	8	18	133	
Waverly, .....	Westmoreland, ..	1	1	90	.....	8	2	7	109	.....	2	4	.....	5	1	9	21	130	
Yough slope, .....	Westmoreland, ..	1	1	75	.....	8	3	8	96	.....	4	5	.....	.....	.....	12	21	117	
Total and average, .....	.....	10	10	840	16	91	20	76	1,063	4	24	41	.....	25	8	89	191	1,254	



[illegible]

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.		All other employes.	Total outside.
Pennsylvania Coke Co.	Fayette, .....	1	.....	33	2	5	.....	.....	41	.....	1	2	.....	33	2	.....	38	79
Pennville, .....	Fayette, .....	1	.....	18	.....	4	1	1	25	.....	.....	.....	.....	.....	.....	2	2	27
American Sheet Steel Co.	Scottsdale, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dexter, .....	Fayette, .....	1	.....	11	1	2	.....	.....	15	.....	.....	.....	.....	9	.....	.....	9	24
Mt. Pleasant Coke Co.	Westmoreland, ..	1	.....	49	.....	5	1	5	61	1	1	2	.....	63	2	.....	69	139
Boyer, .....	Allegheny, .....	1	11	141	.....	12	5	10	170	.....	3	5	2	.....	5	13	28	195
J. W. Shields.	Allegheny, .....	1	.....	22	1	2	.....	.....	26	.....	.....	.....	.....	.....	2	2	4	30
Bowman Bros.	Allegheny, .....	1	.....	55	2	4	.....	.....	62	.....	1	1	.....	.....	.....	6	8	70
R. B. Macintosh.	Westmoreland, ..	1	.....	8	.....	1	.....	.....	10	.....	.....	.....	.....	8	.....	.....	8	18
Amyville, .....	Westmoreland, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
J. W. Overholt.	Westmoreland, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Emma, .....	Westmoreland, ..	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total, .....	.....	64	43	5,218	262	591	115	288	6,781	53	139	201	4	3,445	100	131	4,073	10,614

TABLE III.—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.												Total.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
H. C. Frick Coke Co., .....	Westm'd & Fay.,	19.12	21.84	24.69	24.69	24.92	22.84	24.42	24.15	23.15	25.10	25.84	22.84	284.34
Pittsburg Coal Co., .....	Westmoreland, ..	13.57	12.97	11.82	10.78	16.78	15.30	19.05	17.69	16.08	18.29	13.15	9.87	175.25
S. W. C. C. Co., .....	Westmoreland, ..	27	24	26	26	27	25	26	27	22	27	26	24.2	310.2
Hecla Coke Co., .....	Westmoreland, ..	27	23	26	25	23.75	23	26	24.50	22	23.50	25	19	256.75
Continental Coke Co., .....	Westmoreland, ..	27	23	26	26	26	23	26	27	25	27	26	23	308
Bessemer Coke Co., .....	Westmoreland, ..	20.50	18.50	24.50	25	26.50	23.50	21	15	14.50	22	23.50	20.50	255
W. J. Ralney, .....	Westmoreland, ..	13.50	12	19	26	26.50	25	26	27	25	26.50	25	25	278.5
Painter & Fogg, .....	Westmoreland, ..	9.50	8	11.50	11	9.50	7.50	4.50	12	9	12	18.50	19	182
Penn Gas Coal Co., .....	Westmoreland, ..	19	10	15.50	25	10	14	14	9	10	20	20	16	288.5
Cochran Bros., .....	Westmoreland, ..	26	24	26	26	25	23	26	24	25	25	24	23	288
Laughlin & Co., Limited, .....	Fayette, .....	27	24	26	12	25	23	26	25	26	27	25	25	305
B. F. McElroy & Co., .....	Fayette, .....	27	24	26	26	25	23	26	25	26	26	25	20	282
Pennsylv Sheet Steel Co., .....	Fayette, .....	27	22	25	22	22	23	23	25	25	25	26	21	300
American Sheet Steel Co., .....	Fayette, .....	27	24	26	23	27	24	25	25	10	25	25	25	250
I. R. Stauffer & Co., .....	Fayette, .....	25	25	25	25	25	15	25	25	10	20	25	25	45
Mt. Pleasant Coke Co., .....	Westmoreland, ..	26	24	26	26	25.5	25	24	27	25	27	24.5	25	305
J. W. Shields, .....	Allegheny, .....	27	24	26	26	26	22	24	26	26	26	26	22	299
Rowman Bros., .....	Allegheny, .....	21.4	17.4	17.5	17.5	17.4	18.6	21	18	21.1	19.6	19.6	16.6	225
R. B. MacIntosh, .....	Westmoreland, ..	27	24	26	26	25	23	26	24	24	26	25	22	238
J. W. Overholt, .....	Westmoreland, ..	27	24	26	26	25	23	26	24	24	26	25	22	238
Grand total and average, .....		21.84	19.33	21.70	21.44	20.34	18.85	20.34	20.21	18.69	20.08	22.15	20.35	245.27

TABLE IV.—List of fatal accidents that occurred in and about the mines of the Eleventh Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 14	Andrew Steffe, .....	Bohemian,	Miner, .....	16	S.	...	...	Standard shaft,...	Westmoreland,	Fatally injured by mine cars.
14	Joseph Zaranski, .....	Hungarian,	Miner, .....	24	S.	...	...	Young slope, ....	Westmoreland,	Instantly killed by coming in contact with electric wires.
19	Isaac Chapman, ....	American,	Driver, .....	35	M.	1	3	Rist, .....	Fayette, .....	Fatally injured; crushed between mine cars and pillar.
25	John Quinn, .....	American,	Trip rider, ..	13	S.	...	...	Valley, .....	Fayette, .....	Killed instantly by mine cars.
29	Clarence Fox, .....	American,	Driver, .....	35	M.	1	2	Standard shaft,...	Westmoreland,	Fatally injured by mine cars.
5	John Pettock, .....	Slav, .....	Miner, .....	50	M.	1	4	Marguerite No. 2,	Westmoreland,	Fatally injured by a fall of horseback roof.
14	Kasper Caprell, ....	Italian, ....	Miner, .....	70	M.	1	2	South West No. 4	Westmoreland,	Fatally burned by an explosion of coal dust, caused by blown out shot.
18	Charles Pisto, .....	Italian, ....	Miner, .....	44	S.	...	...	Bessemer No. 2, ..	Westmoreland,	Killed instantly by a fall of roof.
18	Even Harkin, .....	American,	Driver, .....	35	M.	1	4	Calumet, .....	Westmoreland,	Fatally injured by being crushed between steam pillar and roof.
April 1	Peter Carshock, ....	Austrian, ..	Miner, .....	40	M.	1	5	Calumet, .....	Westmoreland,	Fatally injured by a fall of roof.
6	Stephen Barne, .....	Slav, .....	Oven charger, ..	21	S.	...	...	United, .....	Westmoreland,	Fatally injured by being struck by locomotive.
16	Frank Smith, .....	Pole, .....	Miner, .....	20	S.	...	...	Alverton No. 2, ..	Westmoreland,	Killed instantly by a fall of slate.
17	Joseph Bush, .....	Pole, .....	Miner, .....	48	M.	1	2	S. West No. 1, A,	Westmoreland,	Killed by an explosion of fire damp.
17	John Peebler, .....	Scotch, .....	Roadman, ....	38	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Anton Stickie, .....	German, ....	Pipeman, ....	44	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Frank Davenport, ..	American,	Roadman, ....	37	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Jerry Daley, .....	Irish, .....	Laborer, .....	30	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Michael Roy, .....	Scotch, .....	Miner foreman, ..	39	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Dennis Wardley, ....	English, ....	Miner foreman, ..	57	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Samuel Hadley, ....	English, ....	Ast. foreman, ...	38	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Peter Marchando, ....	Italian, ....	Boss driver, ....	54	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Frederick G. G. G., ..	Irish, .....	Laborer, .....	27	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Taylor Gungallus, Jr.,	American,	Roadman, ....	28	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	John Keck, .....	American,	Miner foreman, ..	49	M.	1	4	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	David James, .....	Welsh, .....	Machine runner,	27	M.	1	...	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	John Conto, .....	Slav, .....	Machine boss, ..	22	M.	1	...	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Barney Bald, .....	Italian, ....	Coal loader, ..	35	M.	1	5	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.

10	William Allison, .....	American, ..	Ast. mine supt.	52	M.	1	1	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	William McCune, ....	American, ..	Mine supt., ..	53	M.	1	2	Port Royal No. 2,	Westmoreland,	Killed by an explosion of fire damp.
10	Fred. Krugar, .....	German, ..	Roadman, ..	29	M.	1	....	Port Royal No. 2,	Westmoreland,	Fatally injured by an explosion of fire damp.
10	H. E. Beveridge, ....	American, ..	Coal loader, ..	28	S.	....	....	Port Royal No. 2,	Westmoreland,	Fatally injured by an explosion of fire damp.
10	Thomas Smith, .....	English, ....	Mine foreman,	56	M.	1	....	Port Royal No. 2,	Westmoreland,	Fatally injured by an explosion of fire damp.
25	John Bunetsky, .....	French, ....	Miner, .....	46	M.	1	4	Penn Gas No. 4,	Westmoreland,	Fatally injured by a fall of coal and slate.
15	Parnick Wasil, .....	Pole, .....	Miner, .....	29	M.	1	1	Standard slope, ..	Westmoreland,	Killed almost instantly by a fall of roof.
14	Louis Griffin, .....	Russian, ....	Miner, .....	35	M.	1	5	Hecla No. 2, .....	Westmoreland,	Fatally injured; caught between mine car and timber on heading.
27	John McKitty, .....	Slav, .....	Miner, .....	45	M.	1	4	Marguerite No. 2,	Westmoreland,	Fatally injured by a fall of slate and coal.
30	John Telemack, .....	Pole, .....	Miner, .....	26	S.	....	....	Standard shaft, ..	Westmoreland,	Instantly killed by a fall of roof.
16	William Burkey, ....	American, ..	Miner, .....	29	M.	1	3	Mutual No. 2, ..	Westmoreland,	Instantly killed by a fall of roof.
21	Robert Smith, .....	American, ..	Miner, .....	45	S.	....	....	Osceola, .....	Allegheny, ....	Fatally injured by a fall of slate.
25	Zepro Shatzis, .....	Austrian, ..	Miner, .....	44	M.	1	6	Calumet, .....	Westmoreland,	Fatally injured by a fall of coal.
26	Albert Shrinkle, .....	Slav, .....	Miner, .....	27	M.	1	....	Tip top, .....	Payette, .....	Instantly killed by a fall of roof.
2	Andrew Kamarchick, ..	Slav, .....	Coke drawer, ..	19	S.	....	....	Mammoth slope, ..	Westmoreland,	Instantly killed by being run over by laries on coke oven track.
25	Andrew Stumpf, .....	Bohemian, ..	Miner, .....	30	M.	1	....	Ruff, .....	Westmoreland,	Instantly killed by a fall of roof.
30	Michael Sirene, .....	Slav, .....	Miner, .....	43	M.	1	....	Standard shaft, ..	Westmoreland,	Fatally injured by falling upon his dinner bucket.
5	Martin Casper, .....	Slav, .....	Miner, .....	26	M.	1	1	Mammoth slope, ..	Westmoreland,	Instantly killed by a fall of roof.



TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Eleventh Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
Jan. 5	Jacob Shanks.	American.	Driver.	45	M.	Marguerite No. 2.	Westmoreland.	Injured by mine cars.
7	Clarence Jones.	American.	Miner boy.	16	S.	Amyville.	Westmoreland.	Arm fractured, struck by a fall of slate.
16	Ludwick Yannick.	Pole.	Miner.	36	M.	Franklin.	Fayette.	Injured internally by a fall of roof.
17	Frank Frognier.	Bohemian.	Driver.	23	M.	South West No. 1, B.	Westmoreland.	Leg fractured between mine cars and pillar.
31	Conrad Rinehart.	German.	Machine runner.	52	M.	Yough slope.	Westmoreland.	Leg fractured by fall of coal.
Feb. 14	Antonio Caparelli.	Italian.	Miner.	19	S.	South West No. 4.	Westmoreland.	Burned by flame of blown out shot.
22	Michael Rollick.	Slav.	Miner.	25	S.	Mutual No. 2.	Westmoreland.	Leg fractured by fall of slate.
22	Even Handley.	English.	Miner boy.	16	S.	Big Chief.	Westmoreland.	Leg fractured by fall of slate.
March 2	Berth Fallabaum.	American.	Driver.	25	M.	Humphrey.	Westmoreland.	Leg fractured by mine cars.
30	Frank Lavan.	Pole.	Coal loader.	31	M.	Port Royal No. 1.	Westmoreland.	Shoulder dislocated and scap wound by a post.
April 16	Michael Prepxia.	Pole.	Miner.	32	M.	Alverton No. 2.	Westmoreland.	Scap wound by fall of slate.
27	Joseph Maleski.	Pole.	Miner.	33	M.	Painter.	Fayette.	Shoulder and ribs fractured; fall of slate.
May 10	Stephen Stepanska.	Pole.	Driver.	30	M.	South West No. 2.	Westmoreland.	Breast, shoulders and head bruised; kicked by mule.
27	Edwin Ewing.	American.	Driver.	37	M.	Scottdale.	Fayette.	Severely injured by falling in front of cars.
June 17	Fuller Cover.	American.	Driver.	22	S.	Calumet.	Westmoreland.	Body bruised and injured internally between cars and pillar.
22	Peter Galles.	Slav.	Miner.	25	M.	Alverton No. 1.	Westmoreland.	Arm cut and otherwise injured by fall of roof.
22	Michael Blashkinski.	Slav.	Miner.	21	S.	Alverton No. 1.	Westmoreland.	Body bruised by fall of roof.
25	S. Susura.	Austrian.	Laborer.	18	S.	Calumet.	Westmoreland.	Hand crushed between mine car and pillar.
25	Michael Brown.	American.	Driver.	19	S.	Calumet.	Westmoreland.	Foot bruised, caught between mine car and pillar.
26	Abel Booth.	American.	Miner.	19	S.	Penn Gas No. 4.	Westmoreland.	Severely injured; caught between mine cars.
28	Peter Brunnelli.	Italian.	Miner boy.	15	S.	Eureka.	Westmoreland.	Injured by fall of slate.
29	S. D. Trumbath.	American.	Driver.	30	M.	Painter.	Fayette.	Foot bruised between car and floor of mine.
July 10	James Sollomon.	Italian.	Miner.	26	M.	Ocean No. 1.	Westmoreland.	Foot bruised by fall of slate.
11	Andrew Zelik.	Pole.	Miner.	35	M.	S. West No. 1, B.	Westmoreland.	Breast and shoulder bruised by fall of slate.

13	Joseph Manri, .....	Austrian, ....	Coal loader, ..	40	M. Euclid, .....	Westmoreland, ..	Breast bruised by fall of slate.
18	Geo. O. Hargress, .....	Austrian, ....	Miner, .....	39	S. Euclid, .....	Westmoreland, ..	Injured by fall of slate.
19	Oscar Purgart, .....	German, ....	Miner, .....	37	S. Euclid, .....	Westmoreland, ..	Leg fractured by fall of slate.
5	Bartlett S-meis, .....	Irish, .....	Driver, .....	37	M. Euclid, .....	Westmoreland, ..	Back dislocated by fall of slate.
7	Peter Luciano, .....	Italian, ....	Coal loader, ..	37	M. Euclid, .....	Westmoreland, ..	Ribs dislocated by a post.
9	Michael Steff, .....	Slav, .....	Miner, .....	42	M. Bessemer No. 2, ..	Westmoreland, ..	Collar bone fractured while riding between cars.
10	L. D. Kuntz, .....	American, ....	Driver, .....	22	S. Mammoth shaft, ..	Westmoreland, ..	Collar bone fractured by mine cars.
2	James Marshall, .....	Scotch, .....	Timberman, ...	47	M. Marguerite No. 2, ..	Westmoreland, ..	Wrist fractured by falling into shaft.
12	John Stos, .....	German, ....	Miner, .....	33	S. Waverly, .....	Westmoreland, ..	Hip bruised by falling on the bumper of car.
13	Henry Tepper, .....	German, ....	Miner, .....	43	M. Eureka, .....	Westmoreland, ..	Foot bruised by fall of slate.
21	Frank Keiffer, .....	German, ....	Miner, .....	38	S. Guffey, .....	Westmoreland, ..	Leg fractured by fall of coal.
23	Roach Vmangel, .....	Pole, .....	Coal loader, ..	40	M. Euclid, .....	Westmoreland, ..	Collar bone fractured by fall of slate.
1	Thomas Pawtsek, .....	Slav, .....	Miner, .....	23	S. Enterprise, .....	Westmoreland, ..	Arm fractured by a car.
5	Allen Hensell, .....	Slav, .....	Miner, .....	33	S. Bessemer No. 2, ..	Westmoreland, ..	Leg fractured; knocked down by truck.
7	John Hensell, .....	Austrian, ....	Laborer, .....	37	M. Eureka, .....	Westmoreland, ..	Leg fractured; caught between cars.
9	John Dankanistok, .....	Austrian, ....	Miner, .....	37	M. Eureka, No. 1, ..	Westmoreland, ..	Shoulder bruised by fall of coal.
15	Joseph Fontanna, .....	Austrian, ....	Miner, .....	36	M. Eureka, .....	Westmoreland, ..	Thigh sprained; caught between line cars.
17	David Forsythe, .....	American, ....	Driver, .....	28	M. Enterprise, .....	Westmoreland, ..	Ankle fractured; fell in front of cars.
26	George Pike, .....	American, ....	Driver, .....	40	M. South West No. 2, ..	Westmoreland, ..	Arm crushed by cars.
2	Albert King, .....	American, ....	Laborer, .....	16	S. Eureka, .....	Westmoreland, ..	Leg fractured by fall of slate.
8	Frank Dobritz, .....	German, ....	Miner boy, ...	16	S. Eureka, .....	Westmoreland, ..	Ribs fractured and body bruised by car.
12	Vadzman Dombrosky, ..	Austrian, ....	Miner, .....	27	M. Calumet, .....	Westmoreland, ..	Body fractured by fall of slate.
12	John Perko, .....	Austrian, ....	Miner, .....	45	M. United, .....	Westmoreland, ..	Scalp wound by fall of roof.
20	John Zipchoack, .....	Slav, .....	Miner, .....	24	S. Alverton No. 1, ...	Westmoreland, ..	Back and hip bruised between cage and shaft.
26	Elias Slosses, .....	Pole, .....	Miner, .....	42	M. S. West No. 1, B, ..	Westmoreland, ..	Shoulders and face bruised between car and pillar.
5	Michael Wilcheck, ...	Pole, .....	Miner, .....	36	M. Mammoth shaft, ...	Westmoreland, ..	Leg fractured by fall of slate.
12	Ray Rearna, .....	Italian, ....	Coal loader, ..	41	M. Shaner slope, .....	Westmoreland, ..	Foot and ankle injured by fall of coal.
21	John Dolback, .....	Slav, .....	Miner, .....	41	M. Myers Hollow, .....	Westmoreland, ..	Two ribs fractured by a fall of roof.
28	Michael Cutler, .....	Pole, .....	Miner, .....	39	M. Sterling No. 2, .....	Payette, .....	



# Twelfth Bituminous District.

ARMSTRONG, JEFFERSON, CLEARFIELD, CAMBRIA AND INDIANA  
COUNTIES.

Punxsutawney, Pa., March 7, 1902.

Hon. James W. Latta, Secretary of Internal Affairs, Harrisburg, Pa.:

Sir: I have the honor of submitting the first annual report of this the newly formed Twelfth Bituminous District, for the year ending December 31, 1901.

From the tables it will be noted that the fatal accidents numbered twenty, and the non-fatal sixty, and in some cases these accidents were due to carelessness on the part of the victims themselves.

The general condition of the mines as a whole has been good; the mines have worked reasonably well during the year, and it will be noted that more than half of the production of coal in the district is cut by machines, the number of which is being steadily increased. A summary of the statistics, and the different tables will be found in their appropriate places in the report, which is respectfully submitted.

Yours truly,

R. Hampson,  
Inspector.

## Summary of Statistics.

Number of mines in the district, .....	70
Number of mines operated during the year, .....	65
Number of tons of coal produced, .....	5,173,992
Number of tons of coal produced by machinery, ....	2,941,459
Total production of coke in tons, .....	527,837
Number of coke ovens, .....	1,607
Number of days worked, .....	9,145
Average number of days worked during the year, ...	169
Number of persons employed inside, .....	6,898
Number of persons employed outside, .....	726
Total number employed, .....	7,624
Number of fatal accidents, .....	20
Number of non-fatal accidents, .....	60
Number of tons produced per fatal accident, .....	258,699

Number per non-fatal accident, .....	86,233
Number of persons employed per fatal accident, ....	381
Number of persons employed per non-fatal accident,	127
Number of wives made widows by accidents, .....	13
Number of children orphaned by accidents, .....	34



TABLE A—Showing the Production of Coal, Number of Persons Employed by each Company, Number of Tons Produced per Person Employed During the Year 1901, and the Average Number of Tons Produced per Employee.

Names of Companies.	Number of tons produced.	Number of persons employed.	Number of tons produced per employee.
Rochester and Pittsburg Coal and Iron Co., .....	2,885,391	3,133	920
Berwind-White Coal Mining Co., .....	370,761	639	580
Jno. McLeavy & Co., .....	88,410	161	549
Clearfield Bituminous Coal Corporation, .....	260,790	621	419
Urey Ridge Coal Co., .....	96,829	187	517
Glenwood Coal Co., .....	111,936	261	428
Indiana Coal Co., .....	61,466	175	351
Beech Creek Coal and Coke Co., .....	89,818	161	557
Clearfield and Cush Creek Coal and Coke Co., .....	20,325	53	383
Philadelphia Coal and Coke Co., .....	37,316	92	405
Irona Coal Co., .....	132,990	241	551
Blaine Run Coal Co., .....	41,600	120	263
S. Hegarty's Sons, .....	51,966	104	499
Peale, Peacock & Kerr, .....	116,712	260	448
S. A. Rinn, .....			
Kurtz & Rinn, .....		160	
W. A. Preston, .....	34,188	53	645
Jefferson and Clearfield Coal and Iron Co., .....			
H. A. Bowers, .....	6,899	53	130
Reakirt Bros. & Co., .....	56,260	64	879
Logan Coal Co., .....	7,077	25	283
Gypsy Coal Co., .....			
Ellsworth-Dunham Coal Co., .....			
Cowanshannock Coal Co., .....	464,010	564	822
Burnside Coal Co., .....	46,888	69	592
Clearfield and Cambria Coal and Coke Co., .....	11,572	39	296
Mosher & Jose, .....	1,450	23	63
Coalport Coal Co., .....	6,750	33	204
Weaver & Ettla, .....			
Glasgow Coal Co., .....	2,273	18	126
Joseph Smittle, .....	14,539	29	500
W. J. Nicolls, .....	40,656	98	414
Fred. Bland, .....	28,937	34	851
Harbison-Walker Co., .....	19,946	26	746
Bellwood Coal Co., .....	28,879	63	458
Max Frick, .....	43,358	65	667
Total, .....	5,173,992	7,624	

TABLE B—Number of Employees, Number of Tons of coal produced, number of tons produced per Fatal Accidents, Number of Non-Fatal accidents, Number of tons per Non-Fatal accidents, and number of tons per accident.

Name of Operators.	Number of persons employed.	Number of tons of coal produced.	Number of fatal accidents.	Number of tons per fatal accident.	Number of non-fatal accidents.	Number of tons per non-fatal accident.	Number of tons per accident.
Rochester and Pittsburg Coal and Iron Co.,	3,133	2,885,331	12	240,449	42	68,699	53,433
Berwind-White Coal Mining Co.,	639	370,761	1	370,761	8	46,345	41,195
John McLeavy & Co.,	161	88,410					
Clearfield Bituminous Coal Corporation,	621	260,790					
Urey Ridge Coal Co.,	187	96,829			2	48,414	48,414
Glenwood Coal Co.,	261	111,936					
Indiana Coal Co.,	175	61,466					
Beech Creek Coal and Coke Co.,	161	89,818					
Clearfield and Cush Creek C. & C. Co.,	53	20,325					
Philadelphia Coal and Coke Co.,	92	37,316					
Irvona Coal Co.,	241	132,990	2	66,495	1	132,990	44,330
Blaine Run Coal Co.,	120	41,600					
S. Hegarty's Sons,	104	51,966					
Peale, Peacock & Kerr,	260	116,712	1	116,712	1	116,712	58,356
S. A. Rinn,	160				1		
Kurtz & Rinn,	53	34,188					
W. A. Preston,			1				
Jefferson & Clearfield Coal and Iron Co.,	53	6,899					
H. A. Bowers,	64	56,260					
Logan Coal Co.,	25	7,077					
Gipsy Coal Co.,							
Ellsworth-Dunham Coal Co.,							
Cowanshannock Coal Co.,	564	464,010	1	464,010	1	464,010	232,005
Burnside Coal Co.,	69	40,888	1	40,888	1	40,888	20,444
Clearfield and Cambria Coal and Coke Co.,	39	11,572					
Mosher & Jose,	23	1,450					
Coalport Coal Co.,	33	6,750					
Weaver & Ettla,							
Glasgow Coal Co.,	18	2,273					
Joseph Smittle,	29	14,599					
W. J. Nicolls,	98	40,656	1	40,656	2	20,328	13,552
Fred. Bland,	34	28,937					
Harbeson-Walker Co.,	26	19,946					
Bellwood Coal Co.,	63	28,879					
Max Frick,	65	43,358			1	43,358	
Total,	7,624	5,173,992	20		60		

TABLE D—Giving Name of Mine, Kind of Haulage, Kind of Opening, Pick or Machine Mining, Type of Machine, and Power used to Operate Machines.

Name of Mine.	Kind of Opening.	Method of Haulage.	Pick or Machine.	Type of Machine.	Motive Power Used.
Walston No. 3.	Slope.	Rope.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Walston No. 4.	Drift.	Rope.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Walston No. 5.	Drift.	Mules and locomotive.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Walston No. 6.	Drift.	Electric motor.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Elk Run shaft.	Shaft.	Mules.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Adrian No. 2.	Slope.	Rope.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Adrian No. 4.	Drift.	Mules.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Florence.	Slope.	Rope.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Eleanora No. 1.	Drift.	Mules.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Eleanora No. 2.	Drift.	Rope.	Pick and machine.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Eleanora No. 3.	Drift.	Rope.	Pick.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
Wheatland No. 4.	Slope.	Rope.	Pick.	Harrison, Sullivan and Ingersoll-Sargent.	Compressed air.
West Eureka No. 6.	Slope.	Rope.	Pick.	Harrison.	Compressed air.
West Eureka No. 10.	Drift.	Rope.	Pick.	Harrison.	Compressed air.
West Eureka No. 11.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
West Eureka No. 13.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Conrad.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Shollar.	Slope.	Rope.	Pick.	Harrison.	Compressed air.
Canoe Ridge No. 1.	Drift.	Electric motor.	Pick and machine.	Harrison.	Compressed air.
Canoe Ridge No. 2.	Drift.	Electric motor.	Pick and machine.	Harrison.	Compressed air.
Canoe Ridge No. 3.	Drift.	Electric motor.	Pick and machine.	Harrison.	Compressed air.
Gazzam.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Urey No. 1.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Urey No. 2.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Urey No. 3.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Urey No. 4.	Drift.	Mules.	Pick.	Harrison.	Compressed air.
Glenwood No. 6.	Drift.	Electric motor.	Pick and machine.	Morgan-Gardner.	Electricity.
Glenwood No. 8.	Slope.	Chain.	Pick.	Morgan-Gardner.	Electricity.
Glenwood No. 10.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Indiana No. 1.	Drift.	Rope.	Pick.	Morgan-Gardner.	Electricity.
Indiana No. 2.	Drift.	Rope.	Pick.	Morgan-Gardner.	Electricity.
Indiana No. 3.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Indiana No. 4.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Indiana No. 5.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Aradia No. 1.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Aradia No. 2.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Aradia No. 3.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Aradia No. 4.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Cash Creek No. 1.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Cash Creek No. 2.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Cash Creek No. 3.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
National No. 1.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
National No. 2.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
National No. 3.	Drift.	Mules.	Pick.	Morgan-Gardner.	Electricity.
Arvona No. 3.	Drift.	Rope and locomotives.	Pick.	Morgan-Gardner.	Electricity.

TABLE D—Continued.

Name of Mine.	Kind of Opening.	Method of Haulage.	Pick or Machine.	Type of Machine.	Motive Power Used.
Irvona No. 4, .....	Drift.....	Mules.....	Pick.....		
Blaine Run No. 1, .....	Drift.....	Mules.....	Pick.....		
Blaine Run No. 2, .....	Drift.....	Mules.....	Pick.....		
Oakland No. 1, .....	Drift.....	Rope.....	Pick.....		
Oakland No. 2, .....	Drift.....	Mules.....	Pick.....		
Bloomington No. 3, .....	Drift.....	Mules.....	Pick.....		
Bloomington No. 4, .....	Drift.....	Mules.....	Pick.....		
Bloomington No. 5, .....	Slope.....	Rope.....	Pick.....		
Penn. shaft, .....	Drift.....	Mules.....	Pick.....		
Hillman, .....	Shaft.....	Mules.....	Pick and machine, .....	Harrison, .....	Compressed air.
Penn. shaft, .....	Drift.....	Mules.....	Pick.....		
Fuller Run, .....	Drift.....	Mules.....	Pick.....		
Gypsy, .....	Drift.....	Mules.....	Pick.....		
Victor No. 11, .....	Drift.....	Mules.....	Pick.....		
Yatesboro, .....	Drift.....	Rope.....	Pick.....		
Burnside, .....	Drift.....	Mules.....	Pick.....		
Clearfield, .....	Drift.....	Mules.....	Pick.....		
Wilson Run, .....	Drift.....	Mules.....	Pick.....		
Superior, .....	Drift.....	Mules.....	Pick.....		
O'Shanter, .....	Drift.....	Mules.....	Pick.....		
Chasgow, .....	Drift.....	Mules.....	Pick.....		
Placant Hill, .....	Drift.....	Mules.....	Pick.....		
Blands, .....	Drift.....	Mules.....	Pick.....		
Harbison-Walker, .....	Drift.....	Mules.....	Pick.....		
Great Bend, .....	Drift.....	Mules.....	Pick.....		
Fricks, .....	Drift.....	Mules.....	Pick.....		

NOTE—Giving Approximate Number of Tons Mined by Machines, the Name and Number of Each Kind of Machine in Use, the Number of Machines Using Compressed Air for Power, the Number Using Electricity for Power, Also the Height of the Thickest Vein, and of the Thinnest Vein Where Machines are in Use.

Name of Operator.	Number of tons mined.	Name and Number of Machines Used.	Number using compressed air.	Number using electricity.	Height of thickest and thinnest vein where machines are in use.
Rochester and Pittsburg Coal and Iron Co., .....	2,642,825	Harrison, ..... 73	73	.....	7 ft. 6 in. to 3 ft. 6 in.
Berwind-White Coal Mining Co., .....	100,000	Sullivan, ..... 46	46	.....	7 ft. 0 in. to 5 ft. 0 in.
Clearfield Bituminous Coal Corporation, .....	154,515	Ingersoll-Sergeant, ..... 56	56	.....	4 ft. 0 in.
Glenwood Coal Co., .....	44,018	Sullivan, ..... 5	5	.....	4 ft. 0 in.
Urey Ridge Coal Co., .....	100	Harrison, ..... 12	12	.....	4 ft. 0 in.
Total, .....	2,941,459	Morgan-Gardner, ..... 2	2	.....	4 ft. 0 in.
		Morgan-Gardner, ..... 1	1	.....	4 ft. 0 in.
			204	4	
			208		



TABLE E—Classification of Accidents.

	Killed or fatally injured.	Injured.
Falls of coal, .....	5	20
Falls of slate and roof, .....	11	14
By mine cars, .....	2	12
By explosion of gas, .....	1	1
By electric shocks, .....	1	1
By powder and dynamite explosions, .....	1	8
Miscellaneous causes, .....	1	4
Total, .....	20	60

TABLE G—Nationalities of Persons Killed and Injured.

	American.	English.	Irish.	Scotch.	Welsh.	Swedes.	Pole.	Slav.	Hungarian.	Italian.	Austrian.	Total.
Killed, .....	3	1	1	1	1	1	2	2	1	6	3	20
Injured, .....	15	4	1	5	2	4	6	4	2	16	1	60

TABLE F—Occupations of Persons Killed and Injured.

	Killed or fatally injured.	Injured.	Total.
Miners, .....	10	45	55
Drivers, .....	3	3	6
Machine cutters, .....	1	1	2
Scrapers, .....	2	3	5
Loaders, .....	3	1	4
Trackman, .....	1	1	2
Laborer, .....	1	1	2
Spagger, .....	1	1	2
Pumper, .....	1	1	2
Trapper, .....	1	1	2
Oiler, .....	1	1	2
School boy, .....	1	1	2
Total, .....	20	60	80

TABLE C—Showing method of ventilation, size of fan or furnace, volume of ventilation produced per minute, number of splits, number of splits, quantity in each split, number of employees and quantity per employee.

Name of Mine.	Fan or Furnace.	Size of fan or furnace—feet.	Volume of air produced per minute.	Number of splits.	Volume of Air in Each Split.					Number of employees.	Cubic feet of air per employee.
					First.	Second.	Third.	Fourth.	Fifth.	Sixth.	
Walston No. 3.	Fan.	25	62,000	4	20,000	25,000	6,000	10,000	.....	.....	570
Walston No. 4.	Fan.	7	12,000	1	12,000	.....	.....	.....	.....	.....	83
Walston No. 5.	Fan.	20	35,000	1	35,000	.....	.....	.....	.....	.....	144
Walston shaft.	Fan.	20	64,000	1	64,000	.....	.....	.....	.....	.....	150
Adrian.	Fan.	25	110,000	1	110,000	.....	.....	.....	.....	.....	233
Florence.	Fan.	25	90,000	6	15,000	22,000	20,000	28,000	20,000	.....	150
Florence.	Furnace.	5x5	6,300	6	15,000	15,000	11,000	16,000	17,000	.....	426
Eleanora No. 1.	Fan.	25	104,000	4	6,300	.....	.....	.....	.....	16,000	890
Eleanora No. 2.	Fan.	25	104,000	4	26,000	24,000	20,000	26,000	.....	.....	580
Eleanora No. 3.	Fan.	20	40,000	4	26,000	14,000	.....	.....	.....	.....	155
West Eureka No. 4.	Fan.	20	60,000	4	40,000	20,000	.....	.....	.....	.....	30
West Eureka Nos. 1 and 6.	Fan.	20	30,000	2	18,000	12,000	.....	.....	.....	.....	602
West Eureka No. 10.	Fan.	20	30,000	2	18,000	12,000	.....	.....	.....	.....	170
West Eureka No. 11.	Furnace.	8x6	20,000	1	20,000	.....	.....	.....	.....	.....	286
West Eureka No. 13.	Furnace.	8x6	20,000	1	20,000	.....	.....	.....	.....	.....	971
Conrad.	Furnace.	8x6	28,000	2	15,000	8,000	.....	.....	.....	.....	233
Shollar.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
Shollar.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	553
Canoe Ridge No. 1.	Furnace.	12	60,000	1	60,000	.....	.....	.....	.....	.....	67
Canoe Ridge No. 2.	Furnace.	6x5	20,000	1	20,000	.....	.....	.....	.....	.....	80
Canoe Ridge No. 3.	Fan.	8	25,000	2	15,000	10,000	.....	.....	.....	.....	250
Canoe Ridge No. 3.	Fan.	8	20,000	1	20,000	.....	.....	.....	.....	.....	290
Gazzam.	Fan.	8	22,000	1	22,000	.....	.....	.....	.....	.....	125
Urey No. 1.	Furnace.	7x6	16,000	2	12,000	10,000	.....	.....	.....	.....	86
Urey No. 2.	Furnace.	7x6	9,000	2	9,000	6,000	.....	.....	.....	.....	231
Urey No. 3.	Furnace.	7x6	24,000	2	14,000	10,000	.....	.....	.....	.....	66
Glenwood No. 6.	Fan.	10	40,000	2	12,000	8,000	.....	.....	.....	.....	242
Glenwood No. 8.	Fan.	10	18,000	4	18,000	.....	.....	.....	.....	.....	44
Glenwood No. 8.	Furnace.	7x6	13,000	1	13,000	.....	.....	.....	.....	.....	204
Glenwood No. 10.	Fan.	8	20,000	1	20,000	.....	.....	.....	.....	.....	68
Indiana No. 1.	Fan.	5x6	6,000	1	6,000	.....	.....	.....	.....	.....	171
Indiana No. 2.	Furnace.	6x6	2,000	1	2,000	.....	.....	.....	.....	.....	1
Indiana No. 2.	Furnace.	6x6	2,000	1	2,000	.....	.....	.....	.....	.....	66
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	88
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	227
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	28
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	214
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	10
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	200
Indiana No. 4.	Furnace.	6x6	9,000	2	5,000	4,000	.....	.....	.....	.....	272





## Description of Fatal Accidents.

John W. Powell, driver, was fatally injured while at work in Adrian No. 1 mine, February 5. He was coming on to the sidetrack with a trip of loaded cars, and the front car of his trip caught against the rear car of an empty trip, and this threw the second car of his trip over against him, and he was caught between it and the rib, and fatally injured.

Mike Bisco, miner, was killed by a fall of bone coal at Burnside mine, February 11. He was at work pulling back a pillar, and had no props set under the bone coal which was loose on three sides, when it gave way, and fell upon him with fatal results. This accident was due to his own carelessness in not propping the coal or taking it down.

Garman Ferris, Antonio Rabbie and Joseph Mancuse, miners, were instantly killed by a fall of slate while at work in a room in Walston No. 3 mine, February 12. The room had been driven up to a fault, and they were taking a skip off the pillar so as to strip the fault. The roof was dangerous, and the floor soft, and the noise of the machine at work prevented them from hearing the roof working, and before they could escape they were caught and killed.

Stanley Jadora, scraper, was instantly killed by a fall of top coal at Eleanora No. 2 mine, March 2. He and the machine runner were at work undermining a fall in a pillar, and the jar of the machine brought the coal down upon him. The accident was the result of carelessness on the part of the victim, and of the machine runner.

Joseph Uhrin, scraper, was instantly killed at Walston No. 3 mine on March 16, by a fall of coal while the machine runner was undercutting it, and it was the result of their own carelessness in failing to sprag, and secure the coal before undermining it.

Steve Legasco and John Klingo, loaders, were killed by the same fall of roof at Eleanora mine, May 2. They were loading coal at face of a room that had been driven up the required distance, and had been ordered to set props, but they neglected to do so. The accident was due to their carelessness.

Edward Jepson, miner, was killed by a fall of roof in Irvona No. 3 mine, May 14. He knew the roof at this point was bad, and had one prop set under it, and was preparing to set another when it gave way, swinging out the prop already under it, and he was caught under a "pot." No one was to blame for this accident, as he was a very careful miner.

Angelo Pyne, miner, while at work starting a cross-cut in the heading, was instantly killed by a fall of slate from a slip in the roof at Walston No. 5 mine, June 27.



John Black, trackman, was killed by coming in contact with the electric wire as he was coming out of the cross heading in Yatesboro mine, July 17. He and some other men were coming out to dinner and Black touched his head against the wire, and the shock threw him down with such force that his head struck a rail and his neck was dislocated.

John Readeye, driver, was killed by a fall of coal in Adrian No. 1 mine, August 16, 1901. He had taken two empty cars into a place where they were pulling a pillar back and a fall was already undermined, and as he was passing between the mine cars and coal, a large body of coal fell away from a slip, and he was caught against the cars and killed. This accident was unavoidable.

Charles Lamb, driver, age seventeen, was killed by a fall of slate in a cross heading in Mountindale mine, September 13. He was bringing a trip of loaded cars out of the heading, when a piece of slate broke away from the roof and caught him against the cars, killing him. This was an unavoidable accident.

Ben Goon, miner, was killed by a large lump of coal rolling upon him at Irvona No. 3 mine, October 4. He had fired a shot on the day before which brought down a large body of coal, and on that morning he was breaking up coal, or trying to clean out with his pick the fine coal lying on the bottom, when a large piece rolled over upon him fracturing his skull; accident was unavoidable.

Francis Golova, miner, was instantly killed by a fall of roof in West Eureka No. 10 mine, October 19. They were pulling back pillars, and the sandstone roof had been "working" more or less all day, when suddenly it gave way, and the men ran for their lives, and Golova was last, and was caught by the edge of the fall and killed. The accident was unavoidable.

Dominic Scripic, miner, was fatally injured by being run over by mine cars in Walston No. 3 mine, November 1. The driver was coming out of the heading with cars, and two Italians jumped on the end of the last car so as to ride to the sidetrack, and Golova ran around to the front of the trip as it was in motion and attempted to jump on the bumper of the front car, when he slipped, and fell on the rail and the cars passed over his thigh, inflicting such injuries that he died next morning. The accident was due to his own carelessness.

Pete Lobash, miner, was killed by a fall of coal at Eleanora mine, November 4, 1901. He and his buttty were at work loading a mine car in front of a fall of coal that had been shot down in the center, when a large piece fell away and knocked Lobash against the car with such force that his neck was broken. The accident could have been averted had they taken down the coal that had been loosened by the shot.

Norman Fyke, laborer, was killed at Sykes shaft, November 12. He was working at top of shaft unloading mine cars as they were

hoisted up the shaft, and about 10:30 P. M., he was unloading a car, and hearing the engineer hoisting a car, he left his work, and walked toward the top of the shaft, and the engineer hoisted the cage a little too high, and it broke two sticks of timber that were fastened on the head frame, and one of the pieces in falling struck Fyke on the head. The accident would not have happened had he remained at his work, as that point was 150 feet distant from the shaft.

James Fisher, miner, was killed by a fall of slate while at work in Bloomington No. 4 mine, December 12. He was working on heading stumps, and there was a small portion of one left at a point where a room had been turned away, and as the roof of the heading had been shot down to make height, the rock was resting on this stump, and as he was loading his last car for the day, a large piece of slate fell away from a slip, killing him. The accident was due to his own carelessness, as the roof was working at the time.

### Condition of Mines.

#### Mines in Jefferson County.

From this county the largest tonnage of coal in this district is produced as here are the large mines of the Rochester and Pittsburg Coal and Iron Company, and the Berwind-White Coal Mining Company. The Walston mines are the oldest in this section and at present there are four mines working, Nos. 3, 4, 5 and 6, and the combined production of these mines is very large. No. 3 is a slope mine ventilated by a large fan, producing a large volume of air which is separated into several splits, and is well distributed around the different portions of the workings, which are very extensive. Explosive gas is sometimes found in the advanced workings of the mine, but it is well looked after, and not much trouble is experienced in its removal.

Most of the coal is cut by mining machines operated by compressed air; in a great many places they have trouble with rolls that make the coal low and hard to work. A large water ditch has been made during the year, and the greater volume of the water is drained into the Elk Run shaft, where it is forced to the surface by large pumps.

No. 4 Walston was in reasonably good condition at the different visits during the year, but as most of the solid coal in this mine is worked out, the mine will soon be on the retreat. No. 5 Walston was in good condition during the year, and the old mine has been worked out, but two new openings at other points have been made and the production kept up to its capacity. No. 6 Walston is a new mine opened during the year, and was in good condition.

Elk Run shaft workings adjoin the Walston slope workings, and

the ventilation and drainage was good. They are at present driving a tunnel so as to connect with the lower workings of Adrian No. 1 mine.

### Description of Mines.

Adrian No. 1 mine is a very extensive one, and a large producer of coal, and lies to the north of Elk Run shaft. This mine is ventilated by a large fan, and the current is well distributed around the different splits. A connection has been made from this mine into the Florence mine workings which belongs to the same company. Florence mine is getting to be a very large mine, and a new opening has been put in during the year, which will soon also be in operation. The ventilation of the mine was fair.

Eleanora mines operated by the Rochester and Pittsburg Coal and Iron Company, Nos. 1, 2 and 3 have worked very well during the year, and at the different visits they were found in good condition as regards ventilation and drainage. Many improvements have been made at the above mines, which are noted in another portion of this report.

The Berwind-White Coal Mining Company operates the following mines in this county, West Eureka Nos. 4, 6, 10, 11 and 13, and a new slope has been put down during the year, which will commence operations early the coming spring. Last year they had a fire in the No. 4 mine, but this has been overcome, and now all the workings in this part of the mine are in operation again. The ventilation was good at the different visits. No. 6 mine is a large distance in; the workings are quite extensive, and the ventilation is produced by fan. Mines Nos. 10, 11 and 13 are confined mostly to pillar working, and the condition of these mines was very good during the year.

Conrad and Shollar mines are operated by John McLeavy & Co. Conrad mine had not been worked during the time I have been visiting, but the Shollar mine has been in operation, and at the different visits it has always been found in a healthful condition, as there is a first class Capell fan in use for ventilating.

Sykes shaft operated by the Jefferson and Clearfield Coal and Iron Company has not yet shipped any coal, but about February 1, 1902, they expect to commence shipping, and this will undoubtedly be a very productive mine. The workings of this mine and Soldier mine adjoin, but are in different inspection districts.

Penn mine at Winslow, works regularly as it supplies the locomotives with fuel. The condition of the mine was good during the year.



### Armstrong County Mines.

The only mines in operation in this district in the above county are the Yatesboro mines of the Cowanshannock Coal Company; they have a very extensive mine in operation at present, and are putting in a second operation that will ship early the present year. The coal here is all mined by machines; the mine is ventilated by a Capell fan.

### Indiana County Mines.

Canoe Ridge Nos. 1, 2 and 3 mines are operated by the Clearfield Bituminous Coal Corporation; they are worked by the "Puncher" type of machine, and ventilated by fans and furnace. There was trouble at No. 1 for awhile with a poor roof, and so was there at the other two mines, but now this is improving, and they are opening up quite a territory of coal. The ventilation was very fair.

Hillman mine operated by H. A. Bowers is a new operation, and the mine has been developed considerably. A furnace has been built, and a temporary opening made for escape way, which will be replaced by a more permanent one shortly. The mine was in good condition.

Urey mines Nos. 1, 2 and 3 are operated by the Urey Ridge Coal Company. Nos. 1 and 3 mines have worked most during the year, and the ventilation and drainage of these mines was very good. A new opening to the rise of No. 3 was put in; the coal from this opening goes to No. 3 tipple, and the workings are connected with No. 3.

Glenwood Nos. 6 and 9 are operated by the Glenwood Coal Company, and part of the coal in No. 6 is cut by machines, and the coal hauled to the tipple more than a mile away by an electric motor; the fan is also operated by electricity. In Nos. 4 and 5 openings, the work is mostly confined to pulling out pillars. The condition of the mine was good. No. 9 opening is a slope opening on the B seam, but it has not proved very satisfactory as yet, as the coal is low and roof poor, so there has been very little work done here during the year, and the same may be said of No. 10, which is located in Clearfield county, for they have done very little work at that mine during the year, and there has been trouble with a fault, but have now cut through it.

Indiana mines, operated by the Indiana Coal Company, now embrace the Indiana, Clark and the Horton Run mines, and of these the old Indiana mine has worked most regularly. They have pushed the workings ahead considerably, and the condition of the mine was fair which may also be said of the other mines controlled by this company.

Cush Creek Nos. 1 and 2 mines are operated by the Cush Creek Coal and Coke Company, and the only work of consequence was done at

No. 1 mine, and it was in good condition, while No. 2 mine has never employed miners enough to come under the law, and they have been pushing development work.

Penn mine operated by Reakirt Bros. & Co., has done considerable work during the year, and the old opening has been confined to pillar working. The general condition of the mine was good.

Fuller Run operated by the Logan Coal Company is a new operation; the workings are not very far advanced, and the number of persons employed was not very large. The mine was in very fair condition.

Gipsy mine operated by the Gipsy Coal Company is a new mine that was being put in operation on my last visit; they were putting in the opening and ventilating shaft.

Arcadia Nos 1, 2 and 3 are operated by the Beech Creek Coal and Coke Company, and they have been worked very well during the year, and considerable ground has been opened up. These mines are all ventilated by furnaces, and the condition was good during the year. At No. 2 mine on my last visit they were making preparations for installing machinery for coal cutting and haulage.

Victor No. 11 is operated by the Ellsworth-Dunham Coal Company, and they have not yet commenced to ship coal from the new opening, but have been pushing the main heading and getting ready for shipments when the railroad is completed to the tippie.

### Clearfield County Mines.

Burnside mine operated by the Burnside Coal Company has been worked fairly well during the year, and they have pushed the work in the second opening adjoining the Glenwood mine. The condition of both openings as regards ventilation and drainage was good.

Clearfield mine at New Washington, is operated by the Clearfield and Cambria Coal and Coke Company, and they have put in two additional openings during the year, and are making connections from one to the other. The ventilation and drainage of the mine was good. They have erected a new tippie and dispensed with the plane formerly used.

Jose mine operated by Mosher and Jose, is a small operation, and at my last visit they were pushing a heading to the outside for a second opening, and also to locate a furnace shaft.

National mines Nos. 1 and 2 did not work very regularly during the year and the coke ovens were idle for a long time, but on my last visit they were firing them up again. They have put in a new opening that is really a part of No. 1 mine, and had furnace shaft sunk at time of last visit, and the condition of both openings was good.

Ivona No. 3 mine was in good condition at the different visits. They have to some extent operated the old Barnes mine, and this



also was found all right when visited. This mine is operated by the Irvona Coal Company. They have built twenty additional coke ovens during the year.

Blaine Run mines Nos. 1 and 2 operated by the Baine Run Coal Company were found in good condition during the year. No. 1 mine is ventilated by fan, and No. 2 by furnace.

Oakland Nos. 1 and 2 mines are operated by Hegarty's Sons; No. 1 has now a good tail rope system of haulage, and is ventilated by a Stine fan. An opening has been made on the opposite side of the hill for drainage. The No. 2 mine has worked part of the year, and this is ventilated by furnace; both mines were in good condition during the year.

Superior mine operated by the Coalport Coal Company is a new operation, and is not developed very much as yet, as not very many men are employed. A small furnace has been built for ventilation, and the mine was kept in good condition.

#### Cambria County Mines.

Glasgow mine operated by the Glasgow Coal Company is a new operation near Glasgow, which commenced shipping coal in the fall. They have not done very much work in the mine yet, and are driving for second opening, and will put in a furnace very soon, as the shaft is sunk for that purpose.

Pleasant Hill mine operated by Joseph Smittle is not a very large mine, but they work reasonably steady, and the mine was in good condition during the year.

Mountindale mine, operated by W. J. Nicoll was in good condition at the different visits made during the year. They have leased some adjoining coal, and are now pushing headings into this and opening it up. They have also taken considerable coal from a small opening opposite the tippie, which had been left in previous years, and this will soon be exhausted.

Frick mine operated by Max Frick, was in good condition at the different visits during the year, and an effort is being made to cut the fault that has been impeding work for some time. The roof of this mine still remains very poor, needing constant attention.

Great Bend mine operated by the Bellwood Coal Company, adjoins the above mentioned mine, and the conditions are similar. The mine was fairly ventilated during the year.

Harbison-Walker mine operated by the Harbison-Walker Company, was found in reasonably good condition, and at my last visit they were putting up a Stine fan for ventilation, for in addition to the coal, fire clay for the large fire brick works at this place is also produced.

Blands mine operated by Fred. Bland, supplies coal for locomotives and they work reasonably steady, but they are going up against a big fault at the back of the workings, and this is narrowing up the workings to some extent. The mine was in fair condition.

Gazzam mine operated by the Clearfield Bituminous Coal Corporation has worked very well during the year, and it was always in good condition at the time of the usual visits.

Bloomington mines Nos. 3, 4 and 5 operated by Peale, Peacock and Kerr, and the work in Nos. 3 and 4 mines is decreasing all the time, as most of it is pillar work. In No. 5 mine they are opening up considerable ground, which will be their largest mine. The mines were found in very fair condition during the year.

O'Shanter mine operated by Weaver & Ettla, was not operated during the year.

### Improvements During the Year.

The following improvements have been made at the mines mentioned during the past year.

A new drift mine designated as Walston No. 6 was opened in Perry township near the village of Frostburg. This mine has a territory of some 800 to 1,000 acres of coal, and it has been laid out for convenient and economical operation, using compressed air for mining machines and electricity exclusively for hauling coal. The power plant consists of four 150 horse power boilers, one Ingersoll air compressor, 28x30, and one 250 horse power McEwen engine direct connected to a 150 k. w. Thompson-Ryan generator. One mine locomotive is at present sufficient while the mine is being developed. A 25x6 Guibal fan furnishes the ventilation. The B. R. & P. R. R. was extended from Walston mines to a point some 3,500 feet from the drift mouth, which point was the most advantageous location for a tippie, and an extensive tippie and loading apparatus were erected here, sufficient to care for a mine having a production of 2,000 tons per day. The coal is hauled overland from the mine to the tippie by the same electric locomotive, and the output had reached to 500 tons per day within two months after the mine was opened.

At the Elk Run shaft a second large pump was installed during the year. This a Jeanesville duplex compound condensing, size 16 and 30x20x36, having a capacity of 2,500 gallons per minute at the surface. Two boilers of 150 horse power each were erected, being necessary to supply the additional power for the pump.

At Adrian the improvements of the year consist of the rebuilding of the tippie and coal bins which were burned in November, 1900, and the addition of many improvements and conveniences thereto. Also the old coke crusher has been demolished and a new one erected on somewhat different lines, which when completed, will con-

tain many improvements and facilities for making and handling all the different sizes of crushed coke.

At Florence mine, one additional 28x30 Norwalk air compressor has been installed. Electric mine haulage, covering fully one-half the output of the mine has been installed, the power plant consisting of one Erie City 280 horse power engine, and one McEwen 256 horse power engine, each direct connected to a 150 k. w. General Electric generator. There are eight electric mine locomotives in use. Two boilers of 150 horse power each were added to the plant to furnish power. Florence No. 2, a drift mine has been opened, and is now in process of development.

At the Eleanora mine there has been installed auxiliary haulage engines at a point on the slope about 6,000 feet from the pit mouth. These engines are intended to bring the coal from all the lower headings to the side track on the slope which is located some 4,500 feet from the pit mouth. From this point the outside engines haul to the surface. This plant consists of one pair Webster, Camp & Lane latest haulage engines, cylinders 15"x20", and two 6-foot drums. The pulling rope and the tail are spliced together and are operated on the endless rope system, using a grip car to handle the trips. These engines are housed in a large engine room which was blasted out of the solid rock. The steam is supplied through a bore hole from the McKees Run boiler plant. Two additional 150 horse power boilers have been erected to supply the power. Electric mine haulage was inaugurated in several of the lower headings. The power plant for this has also been located at McKees Run, and consists of one McEwen 280 horse power engine and one 150 k. w. General Electric generator. The power is conveyed through a bore hole into the mine, and three electric mine locomotives are in operation.

The above improvements have all been made at mines operated by the Rochester and Pittsburg coal and Iron Company.

At the Sykesville shaft belonging to the Jefferson and Clearfield Coal and Iron Company, the following equipment has installed, and they expect to ship coal on or about February 1, 1902. Six Erie City boilers of 150 horse power each; two Ingersoll compressors 24"x26"-30" each; one pair Vulcan Iron Works hosting engines, 16"x30"; two Jeanesville Iron Works pumps, 25"x20"x36" and traveling at twenty-five strokes per minute, capable of delivering at the surface of the shaft 10,000 gallons per minute; one eight inch syphon. A tippie is being built and a new head frame. The boiler house and compressor room are built of iron.

The Berwind-White Coal Mining Company at their No. 6 mine has added a new air compressor, and also a 200 horse power Sterling boiler, and also drilled two wells to a depth of 200 feet, and thus obtained a good supply of water for this plant. At their No. 10

mine they have installed two Meadville boilers of eighty horse power capacity each. During the year they put down a new slope, No. 7, which will be in operation early in 1902.

The Cowanshannock Coal and Coke Company at Yatesboro, has during the past year put in four tubular boilers of 150 horse power each, two air compressors, one electric dynamo, and three electric mine locomotives.

The Beech Creek Coal and Coke Company at their Arcadia No. 2 mine, put in one Norwalk compressor 20"x20", capable of developing 130 horse power to operate coal cutting machines, also two tubular boilers of seventy horse power each, and during the coming summer a fan and electric haulage will be installed.

The Urey Ridge Coal Company has had a power wire run from Glenwood Coal Company mine and operated one electric machine a little before the close of the year.



TABLE I—Showing Names of Operators, Railroads, etc., etc., and Location of Collieries in the Twelfth Bituminous District for the Year 1901.

Names of Operators and Collieries.	County.	Name of General Superintendent.	P. O. Address.	Name of Superintendent.	P. O. Address.	Railroad to Mine.
Rochester & Pbg. C. & I. Co.						
Walston No. 3	Jefferson.	Lucius W. Robinson.	Punxsutawney.	Thomas R. Johns.	Walston.	Buffalo, Rochester & Pitts'g.
Walston No. 4	Jefferson.	Lucius W. Robinson.	Punxsutawney.	Thomas R. Johns.	Walston.	Buffalo, Rochester & Pitts'g.
Walston No. 6	Jefferson.	Lucius W. Robinson.	Punxsutawney.	John H. Bell.	Punxsutawney.	Buffalo, Rochester & Pitts'g.
Elk Run shaft.	Jefferson.	Lucius W. Robinson.	Punxsutawney.	A. W. Callaway.	Delaney.	Buffalo, Rochester & Pitts'g.
Adrian No. 2.	Jefferson.	Lucius W. Robinson.	Punxsutawney.	David Fleming.	Eleanora.	Buffalo, Rochester & Pitts'g.
Florence.	Jefferson.	Lucius W. Robinson.	Punxsutawney.	David Fleming.	Eleanora.	Buffalo, Rochester & Pitts'g.
Eleanora No. 1.	Jefferson.	Lucius W. Robinson.	Punxsutawney.	David Fleming.	Eleanora.	Buffalo, Rochester & Pitts'g.
Eleanora No. 2.	Jefferson.	Lucius W. Robinson.	Punxsutawney.	David Fleming.	Eleanora.	Buffalo, Rochester & Pitts'g.
Eleanora No. 3.	Jefferson.	Lucius W. Robinson.	Punxsutawney.	David Fleming.	Eleanora.	Buffalo, Rochester & Pitts'g.
Berwind White C. M. Co.						
West Eureka No. 4	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Penna. & North Western.
West Eureka No. 1 and 6.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Penna. & North Western.
West Eureka No. 10.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Penna. & North Western.
West Eureka No. 11.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Penna. & North Western.
West Eureka No. 13.	Jefferson.	Thomas A. Fisher.	Philadelphia.	A. J. Cook.	Horatio.	Penna. & North Western.
John McLeavy & Co.						
Conrad.	Jefferson.	John McLeavy.	Punxsutawney.			Penna. & North Western.
Shollar.	Jefferson.	John McLeavy.	Punxsutawney.			Penna. & North Western.
Clearfield Bit. Coal Corp'n.						
Canoe Ridge No. 1.	Indiana.	R. A. Shillingford.	Clearfield.	W. A. Broadmeadow.	Rosier.	N. Y. Cen. & Hudson River.
Canoe Ridge No. 2.	Indiana.	R. A. Shillingford.	Clearfield.	W. A. Broadmeadow.	Rosier.	N. Y. Cen. & Hudson River.
Canoe Ridge No. 3.	Indiana.	R. A. Shillingford.	Clearfield.	W. A. Broadmeadow.	Rosier.	N. Y. Cen. & Hudson River.
Gazzam.	Clearfield.	R. A. Shillingford.	Clearfield.	James Methven.	Gazzam.	N. Y. Cen. & Hudson River.
Urey Ridge Coal Co.						
Urey No. 1.	Indiana.			Thomas Bellis.	Burnside.	Pennsylvania Railroad.
Urey No. 2.	Indiana.			Thomas Bellis.	Burnside.	Pennsylvania Railroad.
Urey No. 3.	Indiana.			Thomas Bellis.	Burnside.	Pennsylvania Railroad.
Glenwood Coal Co.						
Glenwood No. 6.	Indiana.	A. M. Riddle.	Glen Campbell.			Pennsylvania Railroad.
Glenwood No. 8.	Indiana.	A. M. Riddle.	Glen Campbell.			Pennsylvania Railroad.
Glenwood No. 10.	Clearfield.	A. M. Riddle.	Glen Campbell.			Pennsylvania Railroad.



Indiana Coal Co.	Indiana, .....	George Scott, .....	Philpsburg, .....	P. R. & N. Y. C. & H. R. R.
Indiana No. 1, .....	Indiana, .....	George Scott, .....	Philpsburg, .....	Pennsylvania Railroad.
Indiana No. 2, .....	Indiana, .....	George Scott, .....	Philpsburg, .....	Pennsylvania Railroad.
Indiana No. 3, .....	Indiana, .....	George Scott, .....	Philpsburg, .....	Pennsylvania Railroad.
Indiana No. 4, .....	Indiana, .....	George Scott, .....	Philpsburg, .....	Pennsylvania Railroad.
Beech Creek Coal & Coke Co.	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Arcadia No. 1, .....	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Arcadia No. 2, .....	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Arcadia No. 3, .....	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Clearfield and Cush Creek	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Clearfield and Coke Co.	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Cush Creek No. 1, .....	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Cush Creek No. 2, .....	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Philadelphia C. & C. Co.	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
National No. 1, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
National No. 2, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Irvona Coal Co.	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Irvona No. 1, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Irvona No. 2, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Irvona No. 3, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Blaine Run Coal Co.	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Blaine Run No. 1, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Blaine Run No. 2, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
S. Hegarty's Sons.	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Oakland No. 1, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Oakland No. 2, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Peale, Peacock & Kerr.	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Bloomington No. 3, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Bloomington No. 4, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Bloomington No. 5, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Bloomington No. 6, .....	Clearfield, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
S. A. Rinn.	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Adrian No. 4, .....	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Kurtz & Rinn.	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Walston No. 5, .....	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
W. A. Preston.	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Penn No. 2, .....	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Jefferson & Cl'd. C. & I. Co.	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Sykes shut, .....	Jefferson, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
H. A. Bowers.	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.
Hillman, .....	Indiana, .....	W. C. Lingle, .....	Patton, .....	N. Y. Cen. & Hudson River.



Harbison-Walker Co.	Cambria. . .	H. M. Kurtz. . . . .	Clearfield. . . . .	J. A. Boyd. . . . .	Blandsburg. . . . .	Penna. & North Western.
Harbison-Walker. . . . .						
Bellwood Coal Co.	Cambria. . .			W. S. Bell. . . . .	Bellwood. . . . .	Penna. & North Western.
Great Bend. . . . .						
Max Frick. . . . .	Cambria. . .			Max Frick. . . . .	Blandsburg. . . . .	Penna. & North Western.
Frick. . . . .						



Clearfield Bituminous Coal Corp.											
Canoe Ridge No. 1	Indiana	26	187,814	210	256	40	550	200	16		
Canoe Ridge No. 2	Indiana	604	72,976		253	124	881	296	12		
Canoe Ridge No. 3	Clearfield				255	621	1,531	496	28		
Gazdani		630	260,790	210							
Total		2,570									
Urey Ridge Coal Co.											
Urey No. 1	Indiana	100	33,224		100	70			8		
Urey No. 2	Indiana		13,613			45	704		4		
Urey No. 3	Indiana	50	49,992			72			5		
Total		150	96,829								
Glennwood Coal Co.											
Glennwood No. 6	Indiana	1,075	98,926		211	175	558		1		
Glennwood No. 8	Indiana		2,121		9	16	23				
Glennwood No. 10	Clearfield	450	11,189		59	70	138		4		
Total		1,525	111,935		120	261	1,119		5		
Indiana Coal Co.											
Indiana No. 1	Indiana	826	51,490		221	99	485		9		
Indiana No. 2	Indiana		969		20	30	10		2		
Indiana No. 3	Indiana		1,488		77	11	15		1		
Indiana No. 4	Indiana		7,519		91	35	72		2		
Total		826	61,406		102	175	582		14		
Beach Creek Coal and Coke Co.											
Arcadia No. 1	Indiana	68	26,810		144	57	200	100	2		
Arcadia No. 2	Indiana	156	52,370		147	37	400	50	5		
Arcadia No. 3	Indiana	37	10,638		148	17	200	150	1		
Total		261	89,818		146	161	800	300	8		
Clearfield and Cushman Creek Coal and Coke Co.											
Cushman Creek No. 1	Indiana	75	17,920		166	45	250		1		
Cushman Creek No. 2	Indiana	23	2,465		119	8	35		1		
Total		109	20,325		113	53	285		2		
Philadelphia Coal and Coke Co.											
National No. 1	Clearfield										
National No. 2	Clearfield	196	37,316	24,109	179	92	200	200	12		
Total		196	37,316	24,109	179	92	300	200	12		





W. A. Preston, Penn No. 2, .....	Jefferson, .....	34,100	25	63	34,188	.....	298	73	.....	407	15	7
Jefferson and Clearfield Coal and Sykes shaft, ‡ .....	Jefferson, .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
H. A. Bowers, Hillman, .....	Indiana, .....	6,829	.....	.....	6,869	.....	95	53	.....	.....	.....	2
Reakirt Bros. & Co., Penn, .....	Indiana, .....	56,269	.....	.....	56,269	.....	180	64	.....	400	.....	11
Logan Coal Co., Fuller Run, .....	Indiana, .....	7,071	.....	.....	7,077	.....	136	25	.....	125	.....	2
Gypsy Coal Co., Gypsy, ‡ .....	Indiana, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellsworth Dunham Coal Co., Victor No. 11, ‡ .....	Indiana, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cowan-Shamrock Coal Co., Yatesboro Nos. 1 and 2, .....	Armstrong, .....	455,910	7,105	995	464,010	.....	302	564	1	1	3,059	1,600
Burnside Coal Co., Burnside, .....	Clearfield, .....	40,688	.....	220	40,888	.....	148	69	1	1	160	12
Clearfield and Cambria Coal and Coke Co., Clearfield, .....	Clearfield, .....	11,432	.....	140	11,572	.....	120	39	.....	40	300	3
Mosher & Jose, Wilson Run, .....	Clearfield, .....	1,350	.....	100	1,450	.....	69	23	.....	.....	.....	1
Coalport Coal Co., Superior, .....	Clearfield, .....	6,725	.....	25	6,750	.....	115	33	.....	55	10	1
Weaver & Etzla, O'Shanter, ‡ .....	Clearfield, .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glasgow Coal Co., Glasgow, .....	Cambria, .....	2,063	115	95	2,273	.....	73	18	.....	40	.....	1
Joseph Smittle, Pleasant Hill, .....	Cambria, .....	11,390	.....	149	14,539	.....	265	29	.....	80	.....	1
W. J. Nicolls, Mountaindale, .....	Cambria, .....	12,039	275	894	40,656	19,910	245	98	1	2	86	80
Fred. Bland, Bland's, .....	Cambria, .....	28,771	.....	166	28,937	.....	260	24	.....	.....	.....	4

TABLE II—Continued.

Names of Operators and Collieries.	County.	Shipments of coal in tons by rail or otherwise.	Number of tons used for steam and heat at colliery.	Sold to local trade and used by employes—tons.	Total production of coal in tons.	Total production of coke in tons.	Number of coke ovens.	Number days worked.	Number persons employed.	Number fatal accidents.	Number non-fatal accidents.	Number kegs powder used.	Number pounds of dynamite used.	Number horses and mules.
Harbison-Walker Co.	Cambria.....	.....	240	837	19,946	.....	.....	304	26	.....	.....	450	.....	2
Harbison-Walker, .....	Cambria.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hollwood Coal Co.	Cambria.....	28,879	.....	.....	28,879	.....	.....	195	63	.....	.....	554	500	5
Great Bend, .....	Cambria.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Frick, .....	Cambria.....	43,658	100	200	43,358	.....	.....	198	65	.....	1	500	50	3
Max Frick, .....	Cambria.....	4,056,715	156,211	23,883	5,173,992	527,837	1,607	\$176	7,624	20	60	29,984	37,726	658
Grand total. ....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

\*Production included with Adrian.

†Production included with Walston Nos. 3, 4 and 6.

‡No shipments this year.

§Average.







TABLE III—Showing the number of each class of employes at each colliery in the Twelfth Bituminous District for the year 1901.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.							Occupations of Persons Employed Outside.							Total outside.	(Grand total inside and outside.		
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foremen.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.	Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.			All other employes.	
Rochester & Pittsburg C. & I. Co.																			
Walston No. 3.	Jefferson.	3	2	839	16	43	14	36	953	1	9	36	2	.....	5	30	83	1,036	
Walston No. 4.	Jefferson.																		
Walston No. 6.	Jefferson.																		
Elk Run shaft.	Jefferson.																		
Adrian No. 2.	Jefferson.	3	3	969	48	72	24	61	1,180	2	11	21	2	.....	4	47	87	1,267	
Florence.	Jefferson.																		
Eleanora No. 1.	Jefferson.	4	.....	657	.....	77	15	29	782	1	7	17	1	.....	2	20	48	830	
Eleanora No. 2.	Jefferson.																		
Eleanora No. 3.	Jefferson.																		
Total.		10	5	2,465	64	192	53	126	2,915	4	27	94	5	.....	11	97	218	3,133	
Berwind White C. M. Co.																			
West Eureka No. 4.	Jefferson.	1	.....	87	7	7	3	6	91	.....	2	5	1	.....	1	3	12	103	
West Eureka Nos. 1 and 6.	Jefferson.	2	1	165	17	13	4	10	212	.....	3	5	1	.....	1	16	27	229	
West Eureka No. 10.	Jefferson.	1	.....	172	.....	8	3	9	145	.....	2	4	1	.....	.....	4	11	156	
West Eureka No. 11.	Jefferson.	1	.....	72	.....	5	.....	4	82	.....	1	.....	.....	.....	1	.....	7	89	
West Eureka No. 12.	Jefferson.	1	.....	36	4	4	2	4	47	.....	1	.....	1	.....	.....	3	5	52	
Total.		6	1	464	24	37	12	33	577	.....	10	14	5	.....	3	30	62	631	

TABLE III—Continued.

Names of Operators and Collieries.	County.	Occupations of Persons Employed Inside.						Occupations of Persons Employed Outside.						Grand total inside and outside.				
		Inside foremen or mine bosses.	Fire bosses.	Miners.	Miners' laborers.	Drivers and runners.	Door boys and helpers.	All other employes.	Total inside.	Outside foreman.	Blacksmiths and carpenters.	Engineers and firemen.	State pickers.		Employed in the manufacture of coke.	Superintendents, bookkeepers and clerks.	All other employes.	Total outside.
John McLeavy & Co.																		
Conrad.	Jefferson.	1		60		3	2	1	67							3	3	70
Shollar.	Jefferson.	1		67		6	3	3	80						1	5	11	91
Total.		2		127		9	5	4	147						1	8	14	161
Clearfield Bit. Coal Corporation.																		
Canoe Ridge No. 1.	Indiana.																	
Canoe Ridge No. 2.	Indiana.	2	27	24	14	5	5	34	36	1	2	6			2	12	17	497
Canoe Ridge No. 3.	Indiana.	1	30	10	5	1	4	4	111	1	2	2			2	6	13	121
Gazzam.	Clearfield.																	
Total.		3		327	31	19	6	88	477	2	4	8			4	126	144	621
Urey Ridge Coal Co.																		
Urey No. 1.	Indiana.	1		60		4		1	66						1	2	4	70
Urey No. 2.	Indiana.	1		40		2		1	44							1	1	45
Urey No. 3.	Indiana.	1		62		4		1	68						1	2	4	72
Total.		3		162		10		3	178						2	5	9	187





Logan Coal Co.		Indiana,	1	17	1	2			21		1		1	2	4	25
Fuller Run,	Indiana,															
Gipsy, Gypsy Coal Co.		Indiana,														
Ellsworth-Dunham Coal Co.		Indiana,														
Victor No. 11,																
Covanshannock Coal Co.																
Yatesboro Nos. 1 and 2,				388	80	3	4	20	496	2	6	8	2	5	45	68
Burnside Coal Co.																
Burnside,				60		4		1	66							
Clearfield & Cambria C. & I. Co.																
Clearfield,				30	2	2			35		1		1		3	69
Mosher & Jose.																
Wilson Run,				20		1			22					1	1	23
Coalport Coal Co.																
Superior,				30		1	1		33							13
Weaver & Eltha.																
O'Shanter,																
Glasgow Coal Co.																
Glasgow,				12		1			14			1		1	2	18
Joseph Smittle.																
Pleasant Hill,				26		1			28					1		29
W. J. Nicolls.																
Mountaindale,				74		5	1	1	82			1		1	14	98
Fred. Bland.																
Blands,				26		4		1	32					1	2	34
Harbison-Walker Co.																
Harbison-Walker,				20		2		1	24					2	2	26
Bellwood Coal Co.																
Great Bend,				49	2	6		2	6			1		1	3	63
Max Frick.																
Frick,				56	1	4			62	1	1		1		3	67
Grand total.			61	5,806	211	387	110	327	6,898	13	82	128	26	58	419	7,624



TABLE III—Continued.

Names of Operators.	County.	Number of Days Worked in Each Month.											
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Rochester and Pittsburg Coal and Iron Co.,	Jefferson,	24 3	22	24 66	23 66	24	24	24 33	23 66	22 66	25	24 33	22 66
Berwind-White Coal Mining Co.,	Jefferson,	24 25	24 75	19 20	19 20	13	10 50	12	12	11	16	14	16 50
John McLeavy & Co.,	Jefferson,	25	13 30	15	13	15	23	12	8	17	27	18	18
Clearfield Bituminous Coal Corporation,	Indiana,	25	17	25	23 50	21 50	15 50	20	14 50	17 50	18	12 50	14
Crey Ridge Coal Co.,	Indiana,	14 66	6 33	10 66	6 66	5 66	15	60	10 50	16	20	20	18
Glenwood Coal Co.,	Indiana and Clearfield,	11	12 33	14 33	16 33	17	66	18 66	16 25	12 50	17 33	17 33	17 33
Indiana Coal Co.,	Indiana,	23	17	22	23	17	17	16 66	18 66	15	16 33	18	13 33
Beech Creek Coal and Coke Co.,	Indiana and Clearfield,	15	18	11 50	9	8	9	10 50	12	14	16	17	19
Clearfield and Cosh Creek Coal and Coke Co.,	Indiana,	15	13	17	17	18	17	14	14	14	15	14	14
Indiana,	Indiana,	15	13	16	13	13	14	12	10	14	15	14	14
Indiana,	Indiana,	22 50	8	12	11	14	18	14	18	18	16	16	16 50
Indiana,	Indiana,	17 50	12 50	20	20	17	16 33	11	13 50	17 50	18	14 50	17 50
Blaine Run Coal Co.,	Clearfield,	16	11 66	18	17	7 66	15	17 33	11	11	14 33	15	15
S. Hegarty & Sons,	Clearfield,	24	20	22	24	22	22	21	20	17	23	20	21
Peale, Peacock & Kerr,	Clearfield,	20	17	19	19	18	11	12	13	16	24	19	21
Curz & Rinn,	Clearfield,	23	13	25	19	9	7	9	13	15	21	21	25
Jefferson and Clearfield Coal and Iron Co.,	Jefferson,	23	13	25	19	9	20	23	14	21	21	21	16
H. A. Powers,	Jefferson,	23	13	25	19	9	7	9	13	15	21	21	25
Reakirt Bros. & Co.,	Indiana,	23	13	25	19	9	7	9	13	15	21	21	25
Logan Coal Co.,	Indiana,	23	13	25	19	9	7	9	13	15	21	21	25
Gibbs Coal Co.,	Indiana,	23	13	25	19	9	7	9	13	15	21	21	25
Ellsworth-Iunham Coal Co.,	Indiana,	23	13	25	19	9	7	9	13	15	21	21	25
Cowan-Shannock Coal Co.,	Indiana,	23	13	25	19	9	7	9	13	15	21	21	25
Burnside Coal Co.,	Indiana,	23	13	25	19	9	7	9	13	15	21	21	25
Clearfield and Cambria Coal and Coke Co.,	Armstrong,	23	13	25	19	9	7	9	13	15	21	21	25
Mosher & Jess,	Clearfield,	23	13	25	19	9	7	9	13	15	21	21	25
Coalport Coal Co.,	Clearfield,	23	13	25	19	9	7	9	13	15	21	21	25
Weaver Coal Co.,	Clearfield,	23	13	25	19	9	7	9	13	15	21	21	25
Gibbs Coal Co.,	Clearfield,	23	13	25	19	9	7	9	13	15	21	21	25
Joseph Smittle,	Clearfield,	23	13	25	19	9	7	9	13	15	21	21	25
W. J. Smith,	Cambria,	23	13	25	19	9	7	9	13	15	21	21	25
Fred Blant,	Cambria,	23	13	25	19	9	7	9	13	15	21	21	25
Harbison-Walker Co.,	Cambria,	23	13	25	19	9	7	9	13	15	21	21	25
Fellwood Coal Co.,	Cambria,	23	13	25	19	9	7	9	13	15	21	21	25
Max Frick,	Cambria,	23	13	25	19	9	7	9	13	15	21	21	25

TABLE IV—List of fatal accidents that occurred in and about the mines of the Twelfth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Number of widows.	Number of orphans.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
*Feb. 5	Jno. W. Powell,	Welsh, .....	Driver, .....	27	M.	1	1	Adrian, .....	Jefferson,....	Fatally injured; caught between a car and pillar.
*11	Mike Bisco, .....	Austrian, ..	Miner, .....	28	S.	...	...	Burnside .....	Clearfield,....	Killed by a fall of roof.
*12	Garman Ferris, .....	Italian, ..	Miner, .....	31	M.	1	2	Walston No. 3, .....	Jefferson,....	Instantly killed by the same fall of slate.
*12	Antonio Rabbie, .....	Italian, ..	Miner, .....	33	M.	...	...	Walston No. 3, .....	Jefferson,....	Instantly killed by a fall of top coal.
*12	Joseph Mancuse, .....	Italian, ..	Miner, .....	31	S.	...	...	Walston No. 3, .....	Jefferson,....	Instantly killed; caught under a fall of coal.
*March 2	Stanley Jedora, .....	Pole, .....	Scraper, .....	21	S.	...	...	Eleanora No. 2, .....	Jefferson,....	Instantly killed by the same fall of roof.
*16	Joseph Whim, .....	Slav, .....	Scraper, .....	25	M.	1	1	Walston No. 3, .....	Jefferson,....	Instantly killed by the same fall of roof.
*May 2	Steve Logaso, .....	Austrian, ..	Leader, .....	48	M.	1	1	Eleanora No. 2, .....	Jefferson,....	Instantly killed by a fall of roof.
*2	John Kilgus, .....	Austrian, ..	Leader, .....	37	M.	1	1	Eleanora No. 2, .....	Jefferson,....	Killed by fall of roof.
*11	Edward Jensen, .....	English, ..	Miner, .....	33	M.	1	1	Iryona No. 3, .....	Clearfield,....	Killed by electric shock.
June 27	Angelo Fyne, .....	Italian, ..	Miner, .....	28	M.	1	1	Walston No. 5, .....	Jefferson,....	Killed by fall of coal.
Aug. 16	John Black, .....	Scottish, ..	Trackman, ..	29	M.	1	1	Yatesboro, .....	Armstrong,....	Killed by fall of coal.
Sept. 13	John Readeye, .....	Hungarian, ..	Driver, .....	35	M.	1	6	Adrian No. 1, .....	Jefferson,....	Instantly killed by coal rolling on him.
Oct. 4	Charles Lamb, .....	American, ..	Driver, .....	17	S.	...	...	Mountaindale, .....	Cambria,....	Instantly killed by coal rolling on him.
19	Ben Guon, .....	American, ..	Miner, .....	19	S.	...	...	Iryona No. 3, .....	Clearfield,....	Killed by a fall of roof.
1	Francis Tolwa, .....	Italian, ..	Miner, .....	44	M.	1	2	W. Eureka No. 10, .....	Jefferson,....	Killed by mine cars.
1	Dominico Scripico, .....	Italian, ..	Miner, .....	40	M.	1	2	Walston No. 3, .....	Jefferson,....	Neck broken by a fall of coal.
Nov. 4	Pete Lobash, .....	Slav, .....	Leader, .....	34	M.	1	...	Sikes shaft, .....	Jefferson,....	Head crushed by falling timber.
12	Norman Fyke, .....	American, ..	Leader, .....	17	S.	...	...	...	Jefferson,....	Killed by fall of slate.
Dec. 12	James Fisher, .....	Pole, .....	Miner, .....	49	M.	1	6	Bloomington No. 4, .....	Clearfield,....	Killed by fall of slate.

\*These accidents occurred in the Fourth District before rearrangement of Districts, May 15, 1901.

TABLE V.—List of non-fatal accidents that occurred in and about the mines of the Twelfth Bituminous District for the year ending December 31, 1901.

Date of accident.	Name of Person.	Nationality by birth.	Occupation.	Age.	Married or single.	Name of Colliery.	County.	Nature and Cause of Accident in Brief.
*Jan. 1	Natal Souman.	Italian.	Miner.	45	M	Walston No. 3.	Jefferson.	Collar bone broken by fall of coal.
4	Joseph Said.	Italian.	Miner.	36	M	Adrian No. 1.	Jefferson.	Collar bone broken; car caught him against a prop.
*8	Jacob Cupets.	Pole.	Miner.	40	M	Adrian No. 1.	Jefferson.	Ankle, knee and shoulder severely injured by fall of slate.
18	Jake Rosenberg.	American.	Miner.	25	M	Irvona.	Clearfield.	Leg broken by fall of coal.
*28	David Babvak.	Pole.	Machine cutter.	38	S	Yatashora.	Armstrong.	Injured by a fall of slate.
*March 11	David Anderson.	Swede.	Miner boy.	30	M	Elk Run shaft.	Jefferson.	Injured by a fall of slate.
14	Evan Melnie.	Swede.	Miner boy.	14	S	West Eureka No. 11.	Jefferson.	Arm broken by fall of bone coal.
*April 5	Andrew Kuntze.	Hungarian.	Miner boy.	35	S	Adrian No. 1.	Jefferson.	Injured about body by fall of coal.
8	James McCloskey.	American.	Miner.	15	S	Eleanora No. 2.	Jefferson.	Leg fractured by fall of coal.
*13	Giacomio Bruto.	Italian.	Scraper.	22	S	Adrian No. 1.	Jefferson.	Leg broken by a fall of coal.
20	Daniel Bazaine.	Austrian.	Miner.	27	M	Eleanora No. 2.	Jefferson.	Leg broken by fall of coal.
22	Adam Sulich.	Slav.	Miner.	34	M	West Eureka No. 10.	Jefferson.	Body crushed by fall of coal.
*May 2	J. W. Arnold.	American.	Miner.	40	M	Prick.	Cambria.	Injured by fall of rock.
7	John Shoushton.	Pole.	Miner.	22	S	Florence.	Jefferson.	Leg broken by fall of coal.
17	Thomas Connors.	Irish.	Miner.	35	S	Walston No. 3.	Jefferson.	Severely injured and lacerated; caught between cars.
6	Fred. Hainsey.	American.	Miner.	38	M	Mountaineate.	Cambria.	Leg broken; fall of slate.
25	Sam Rope.	Italian.	Loader.	25	S	Florence.	Jefferson.	Thigh broken; fall of coal.
25	Geo. McGill.	American.	Miner.	17	S	Walston No. 3.	Jefferson.	Burned by powder. Peter Leno was emptying a five pound can of powder into another can, when a spark dropped from his lamp, causing the powder to explode.
27	Peter Leno.	Italian.	Miner.	28	S	Walston No. 3.	Jefferson.	Foot bruised by car.
27	Albert Leno.	Italian.	Miner.	17	S	Walston No. 3.	Jefferson.	Injured; squeezed between cars.
27	Peter Priute.	Italian.	Miner.	17	S	Walston No. 3.	Jefferson.	Loss of right eye. Was breaking up a sand rock with dynamite, and as it hung fire he went back, thinking it had failed, when it exploded.
28	James Fitzpatrick.	American.	Driver.	30	M	Adrian No. 1.	Jefferson.	
11	John Jones.	Welsh.	Scraper.	20	S	Florence.	Jefferson.	
17	Mike Kearpon.	Slav.	Miner.	48	M	Eleanora.	Jefferson.	

23	Mike Zemba, .....	Pole, .....	Miner, .....	38	M. Eleanora, .....	Jefferson, .....	Shoulder dislocated by fall of roof.
25	Robert Seouid, .....	English, .....	Miner, .....	53	M. Burnside, .....	Clearfield, .....	Fingers mashed while trying to lift car on truck.
31	Charles Ostrasky, .....	Pole, .....	Miner, .....	25	S. Florence, .....	Jefferson, .....	Arm broken by motor; was caught between motor and rib.
2	Ginson Vasta, .....	Italian, .....	Miner, .....	38	S. Adrian No. 1, .....	Jefferson, .....	Head cut and collar bone broken by fall of loose coal.
6	John Ward, .....	English, .....	Miner, .....	33	S. Eleanora, .....	Jefferson, .....	Leg broken by a fall of coal.
12	Alce Smith, .....	American, .....	Miner, .....	33	M. West Eureka No. 6, .....	Jefferson, .....	Head and face cut by a fall of slate.
31	Alex. Wilson, .....	Scott, .....	Miner, .....	48	S. Adrian No. 1, .....	Jefferson, .....	Brained ankle; lashed in powder; while driving by explosion of powder; while filling a cartridge a spark from a lamp fell into it.
5	Antonio Micella, .....	Italian, .....	Miner, .....	20	S. Walston No. 4, .....	Jefferson, .....	Injured by cars.
15	Peter Catania, .....	Italian, .....	Miner, .....	18	S. Walston No. 4, .....	Jefferson, .....	Leg broken by fall of coal.
11	Tony Waytak, .....	Pole, .....	Miner, .....	17	S. Florence, .....	Jefferson, .....	Shoulder fractured by a car.
28	Robert Laird, .....	Scott, .....	Miner, .....	41	S. Eleanora No. 3, .....	Cambria, .....	Leg broken by a fall of rock.
23	Alex. Lipsie, .....	American, .....	Miner, .....	24	S. Mountdale, .....	Jefferson, .....	Leg crushed by fall of coal.
7	Steve Katch, .....	Hungarian, .....	Miner, .....	38	S. Adrian No. 1, .....	Jefferson, .....	Ankle injured by fall of coal.
8	Henry Campbell, .....	American, .....	Miner, .....	21	M. West Eureka No. 10, .....	Jefferson, .....	Ankle sprained by fall of coal.
13	P. P. Swanson, .....	Swede, .....	Pumper, .....	19	S. Walston No. 3, .....	Jefferson, .....	Burned by gas.
15	Mike Ford, .....	American, .....	Driver, .....	22	S. Eleanora No. 3, .....	Jefferson, .....	High dislocated between cars.
25	James Bell, .....	English, .....	Driver, .....	17	M. Florence, .....	Jefferson, .....	Arm broken by fall of coal.
35	James Bell, .....	Scott, .....	Driver, .....	51	M. Florence, .....	Jefferson, .....	Collar bone broken by fall of coal.
26	James Jones, .....	Italian, .....	Swagger, .....	13	S. Florence, .....	Jefferson, .....	Squeezed about the hips by cars.
5	Samuel Engle, .....	American, .....	Tranier, .....	15	S. Florence, .....	Jefferson, .....	Foot injured by car.
14	Alfon Parnell, .....	Italian, .....	Miner, .....	29	M. Florence, .....	Jefferson, .....	Brused by fall of slate.
16	Robert Caldwell, .....	Scott, .....	Miner, .....	50	M. Adrian No. 1, .....	Jefferson, .....	Head cut; struck it against a cross bar.
22	Paul Ganel, .....	Italian, .....	Miner, .....	15	S. Eleanora No. 3, .....	Jefferson, .....	Leg broken by fall of rock.
23	Mike Quarko, .....	American, .....	Miner, .....	39	M. Florence, .....	Jefferson, .....	Leg bruised by fall of slate.
25	John Jones, .....	American, .....	Olter, .....	12	West Eureka No. 6, .....	Jefferson, .....	Leg broken; struck by hoisting rope in tippie.
25	John Jones, .....	American, .....	Spragger, .....	19	S. Florence, .....	Jefferson, .....	Leg crushed between motor and prop.
2	Frank North, .....	English, .....	Miner, .....	16	S. Urey No. 1, .....	Indiana, .....	Burned by powder. In emptying a can of powder a spark dropped from the can and set the powder on fire.
3	John K. ...	Slav, .....	Miner, .....	40	M. Urey No. 1, .....	Indiana, .....	Struck by a piece of heavy wire and was considerably shocked.
16	Isaac Johnson, .....	Swede, .....	Miner, .....	35	M. Florence, .....	Jefferson, .....	Back injured by fall of bone coal.
22	Stana Stanayova, .....	Slav, .....	Miner, .....	40	M. Adrian No. 1, .....	Jefferson, .....	Leg fractured by a fall of coal.
26	Dominic Polka, .....	Italian, .....	Miner, .....	40	M. Walston No. 3, .....	Jefferson, .....	Leg fractured by a fall of coal.
28	Joseph Smith, .....	American, .....	Miner, .....	23	S. West Eureka No. 10, .....	Jefferson, .....	Leg broken by fall of slate.

\*Accidents occurred in Third, Fourth and Eighth Districts prior to May 15.





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